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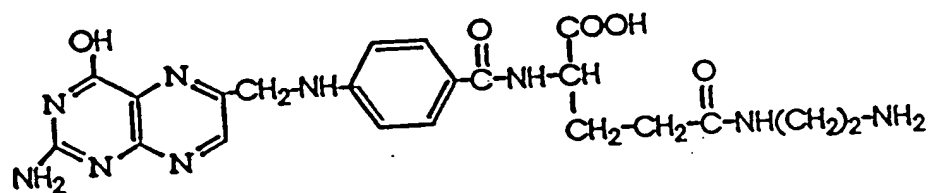
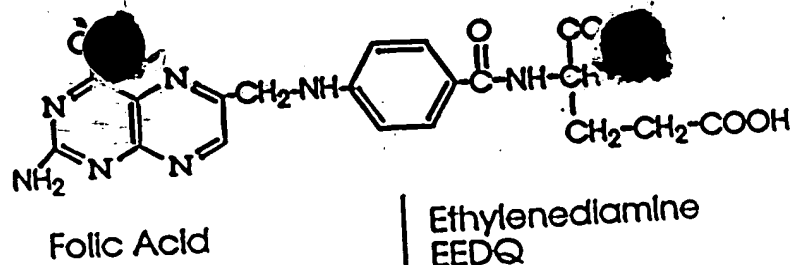
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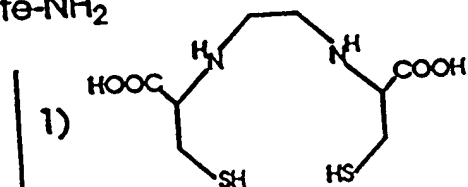
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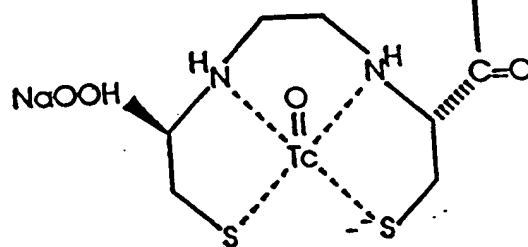
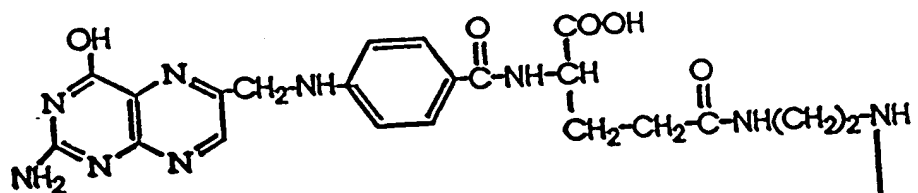


Folate-NH₂



(EC), Sulfo-NHS, EDC

2) $\text{Na}^{99\text{m}}\text{TcO}_4 / \text{SnCl}_2$



^{99m}Tc -EC-folate

FIG. 1

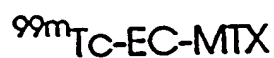
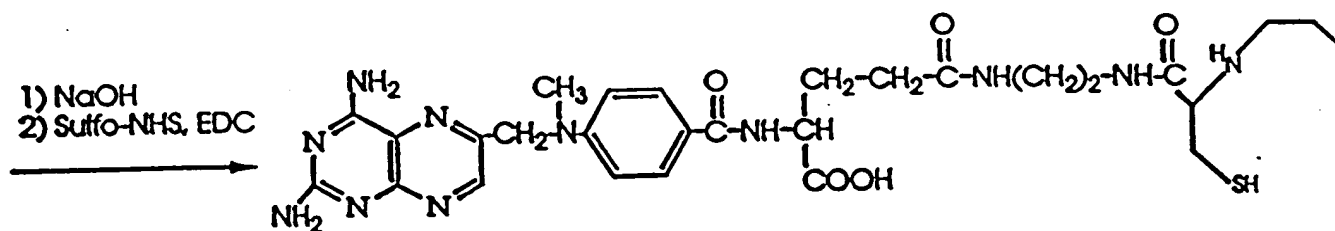
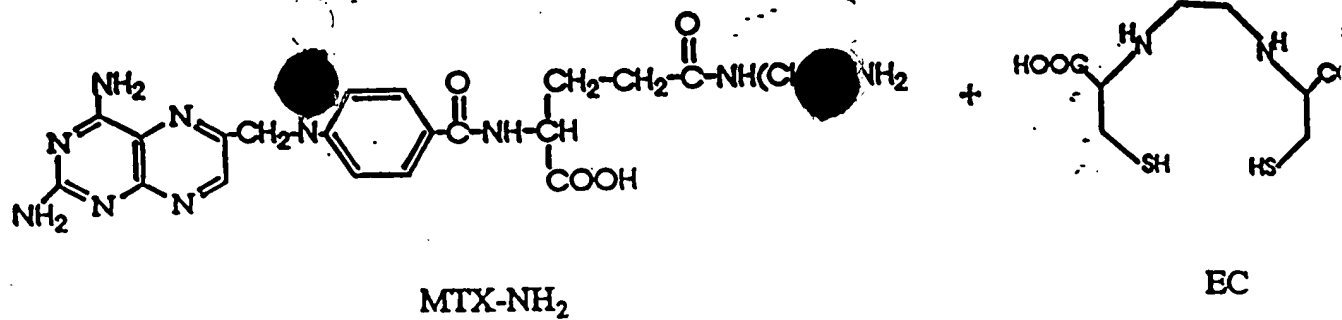


FIG 2

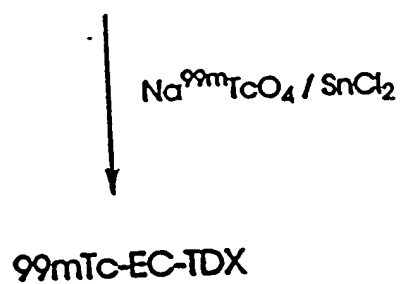
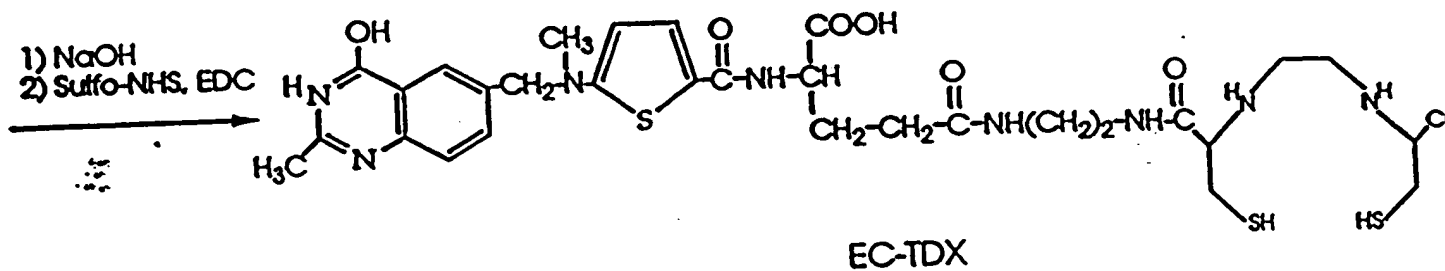
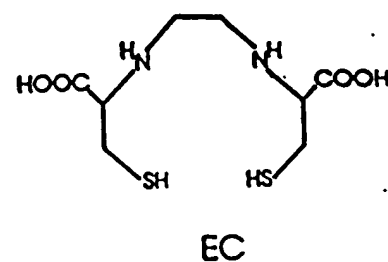
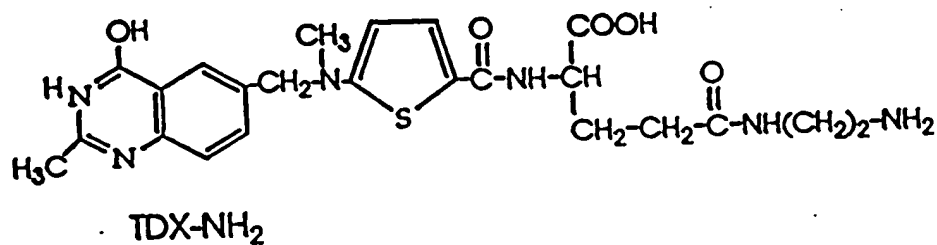


FIG. 3

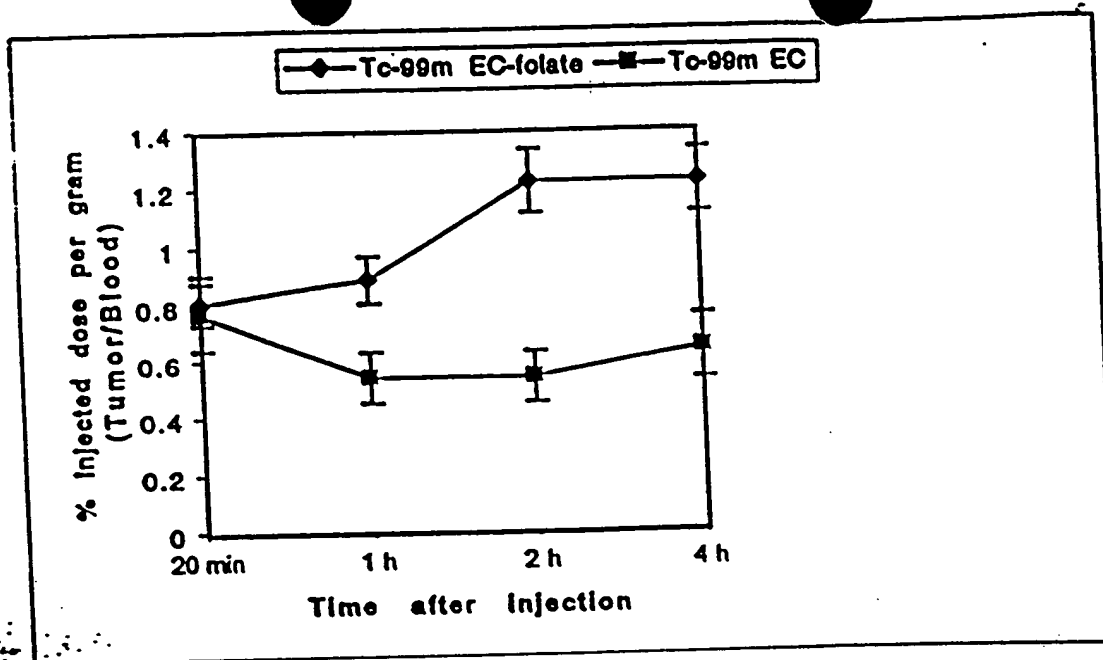


FIG. 4

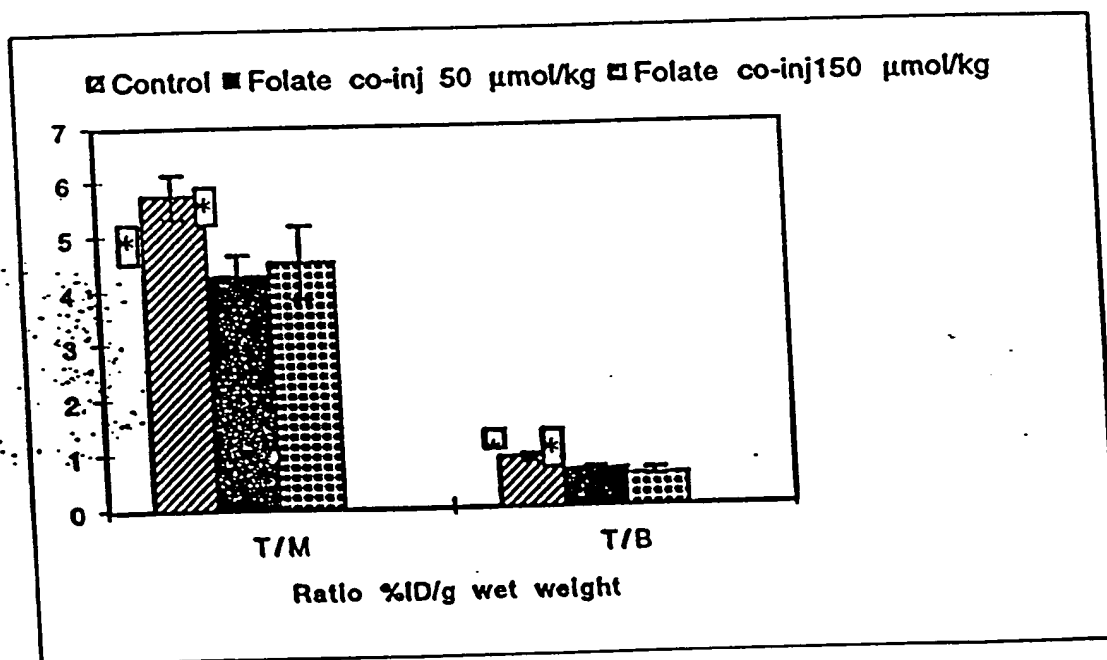


FIG. 5

001250" 23105000

Tc-99m EC-folate

Tc-99m EC

Tc-99m EC-folate

Tc-99m EC

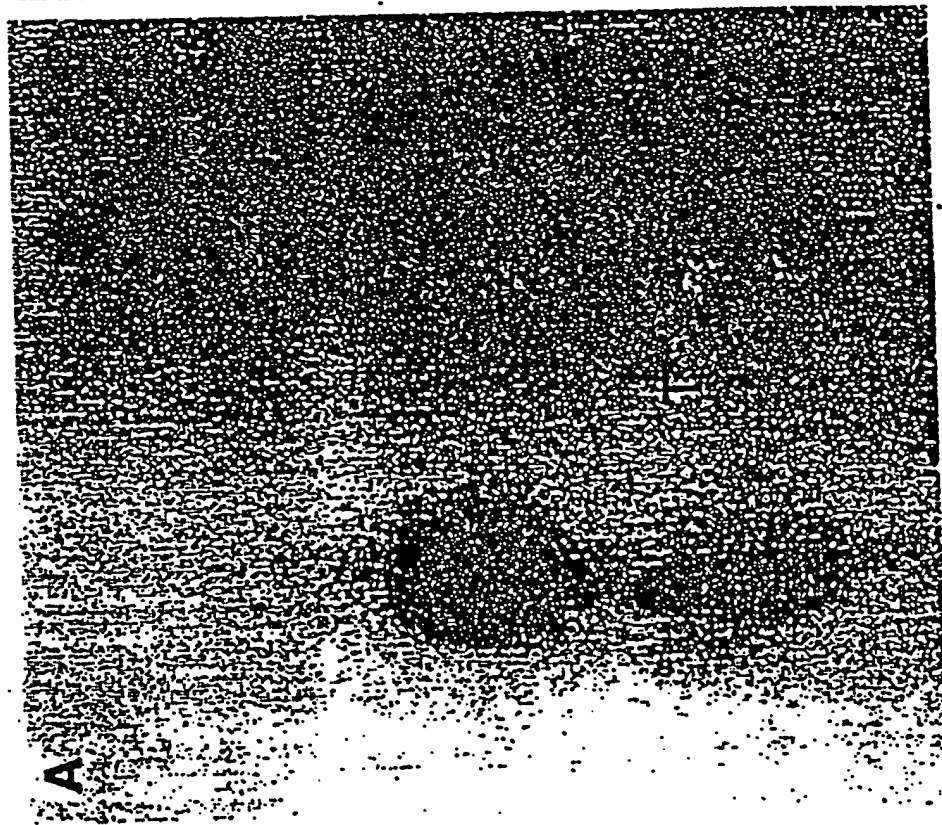
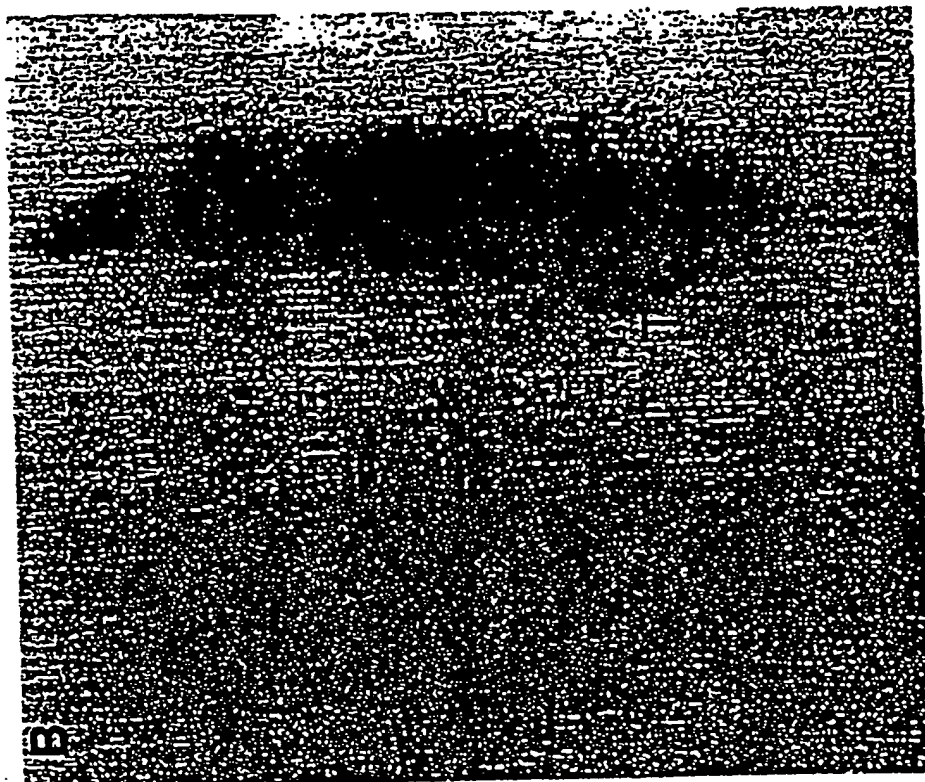


FIG. 6B

FIG. 6A

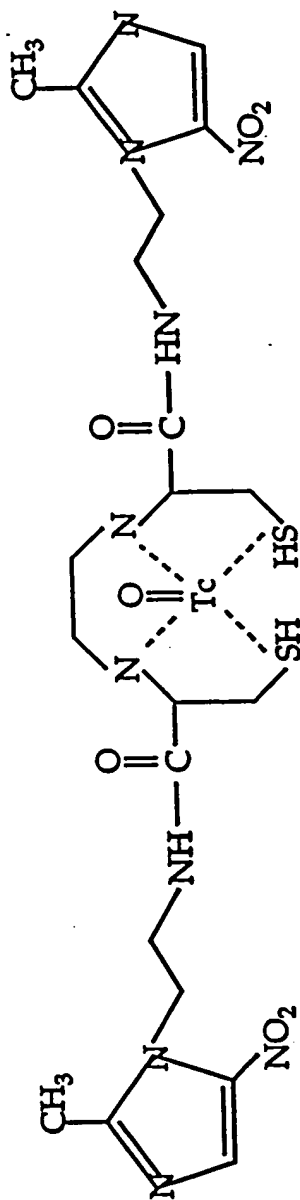
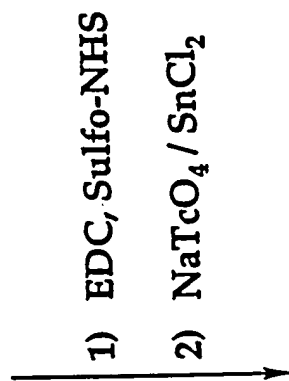
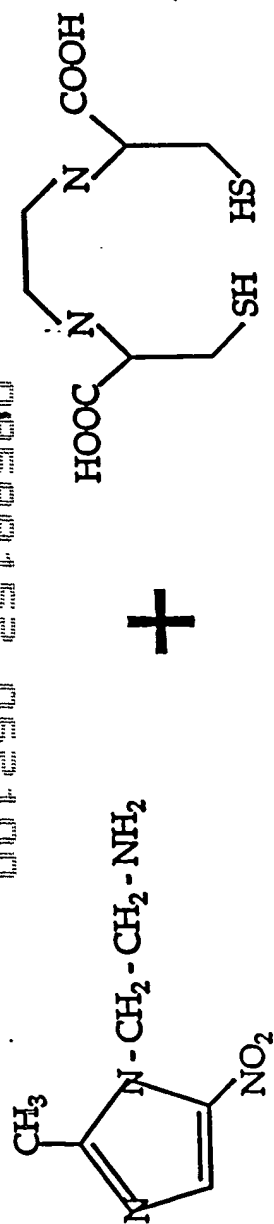
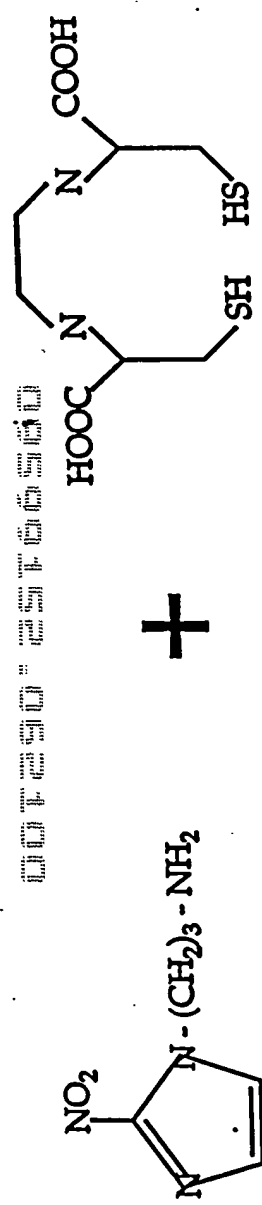


FIG. 7



EC

2-Nitroimidazole - NH₂

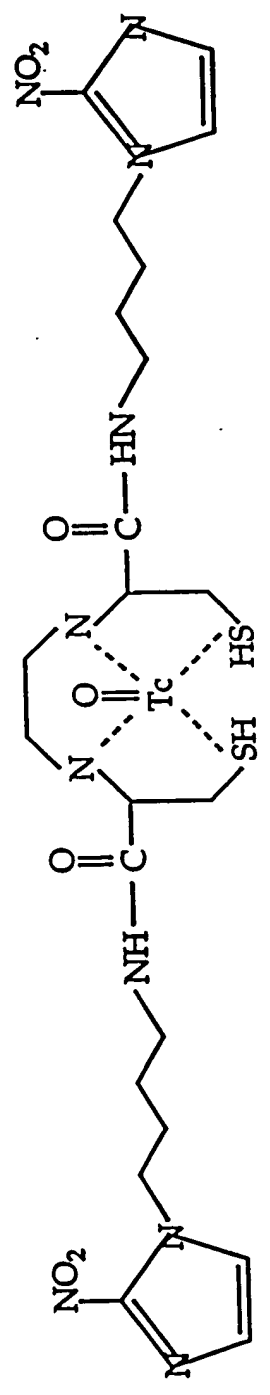
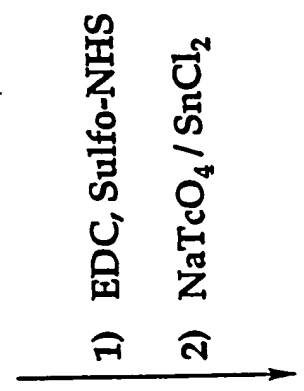


FIG. 8A

0659452-062400

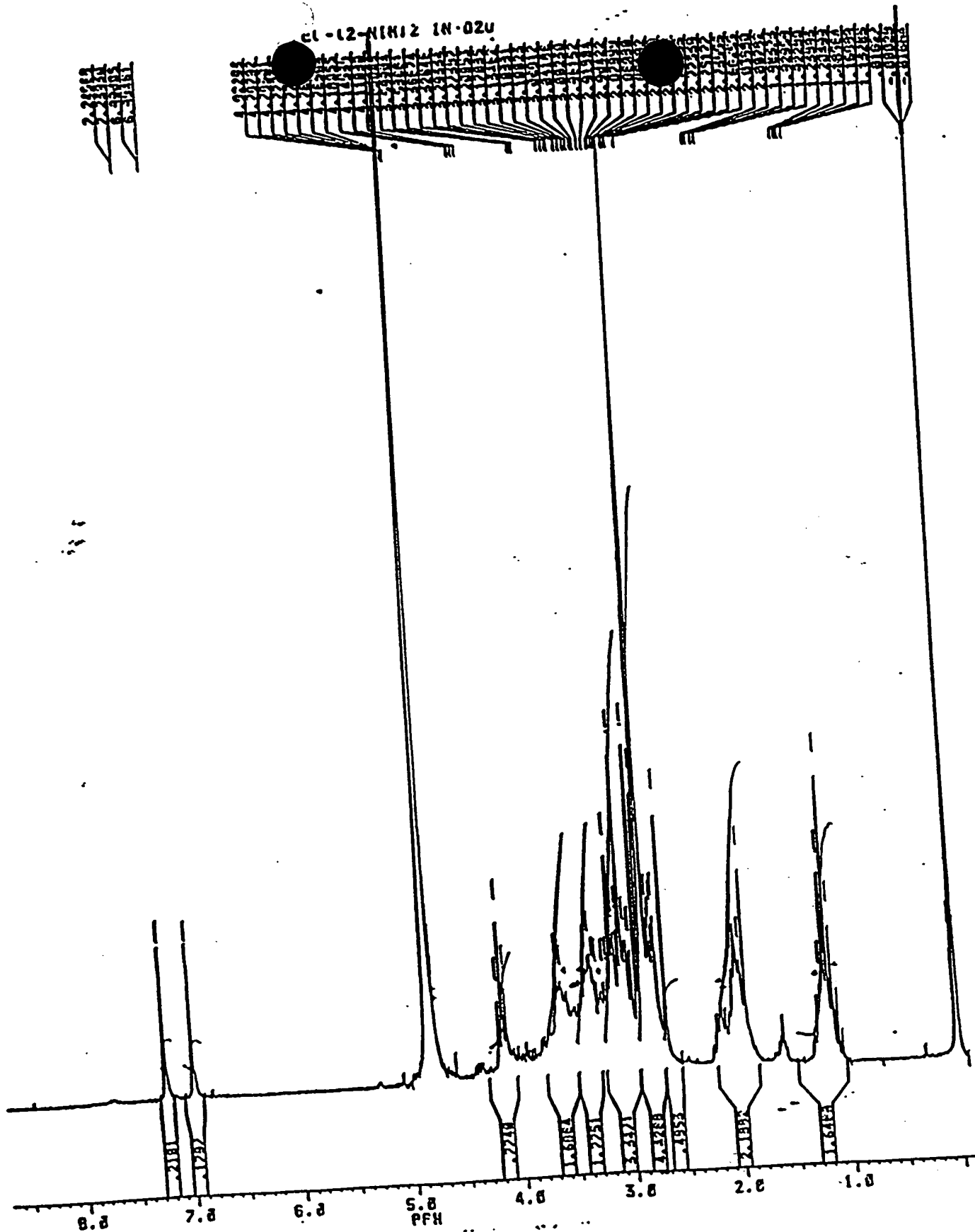


FIG. 8B

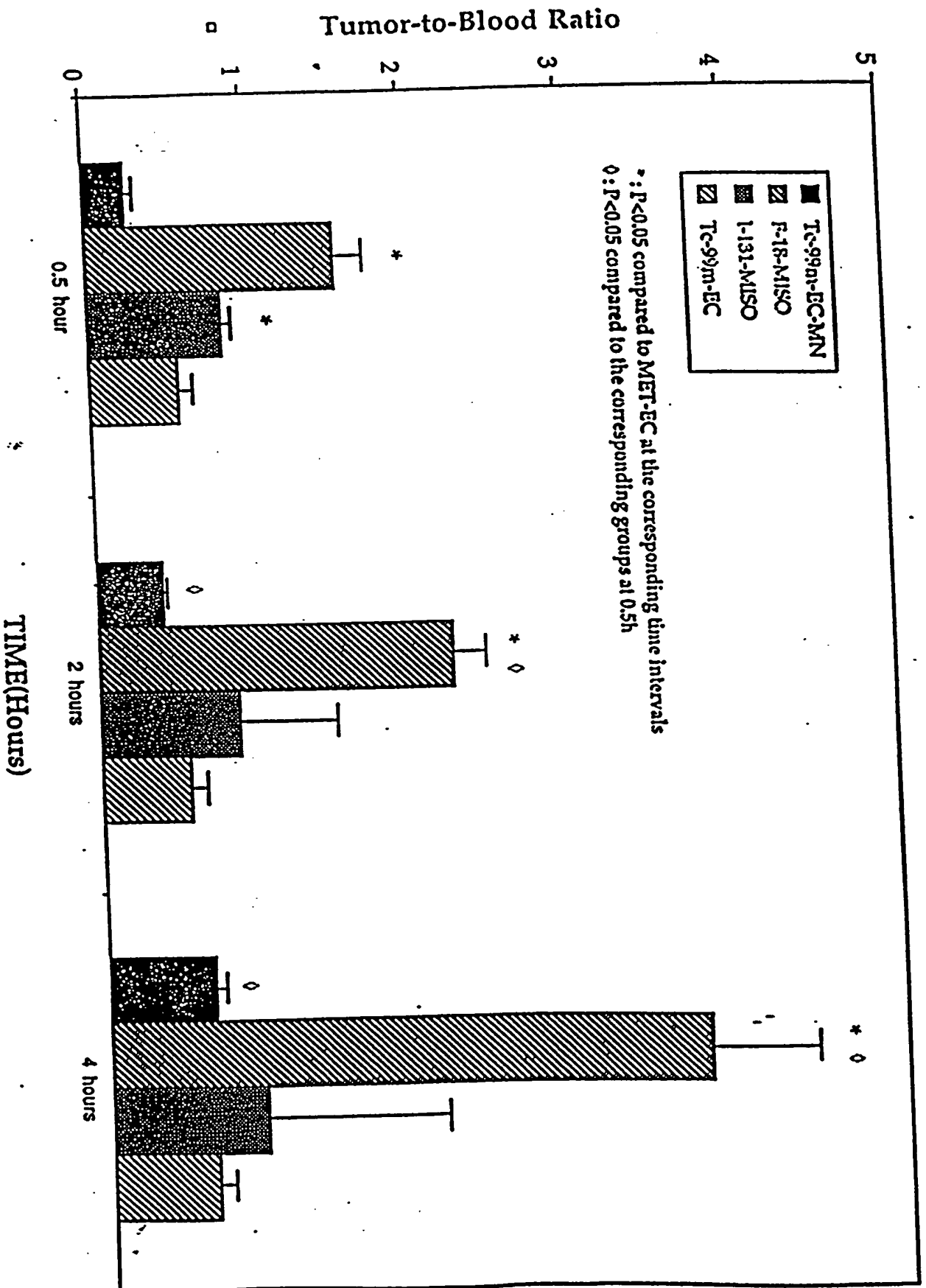


FIG. 9

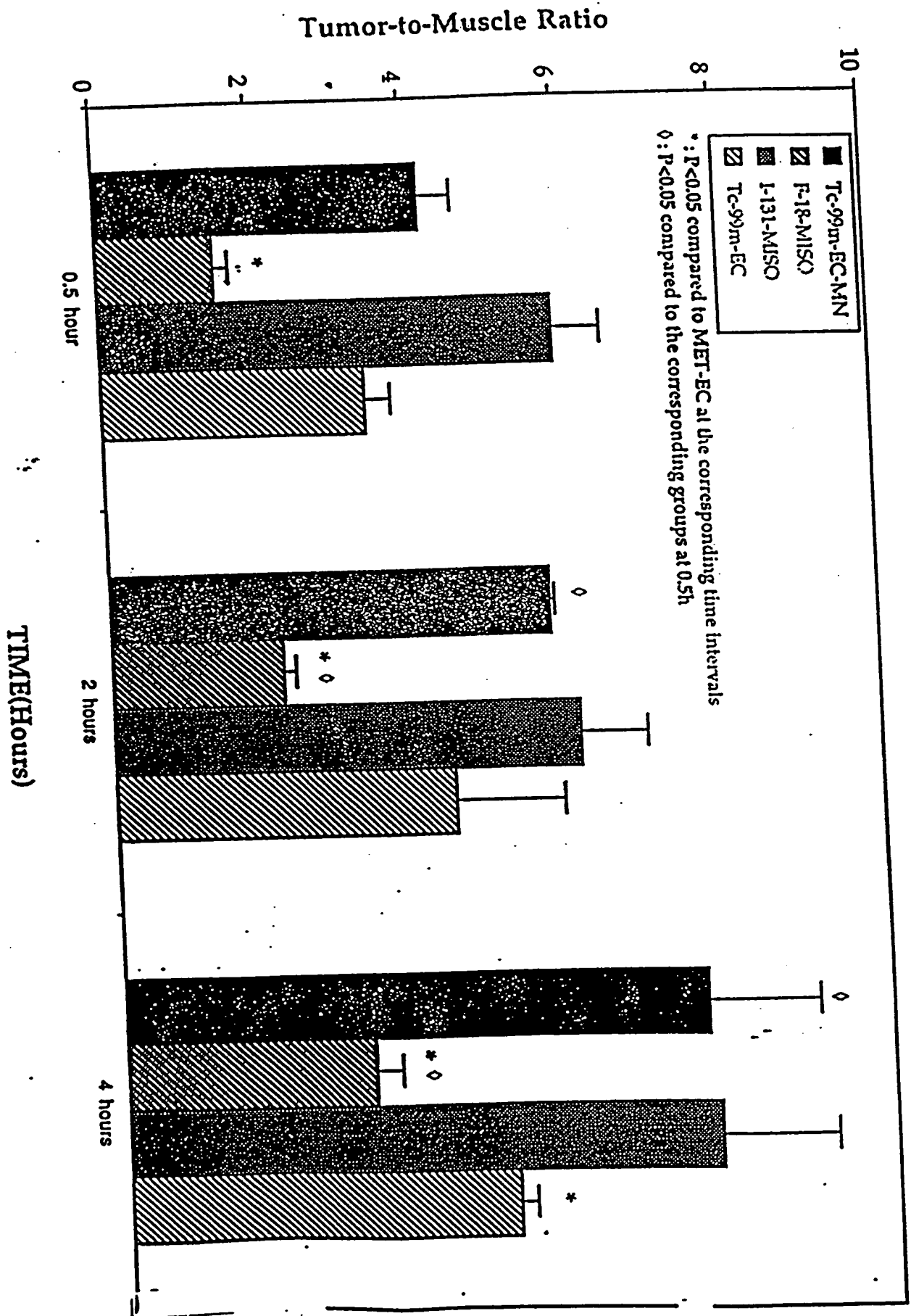


FIG. 10

FIG. 11A



FIG. 11B



007290-25156560

007250-25T06560

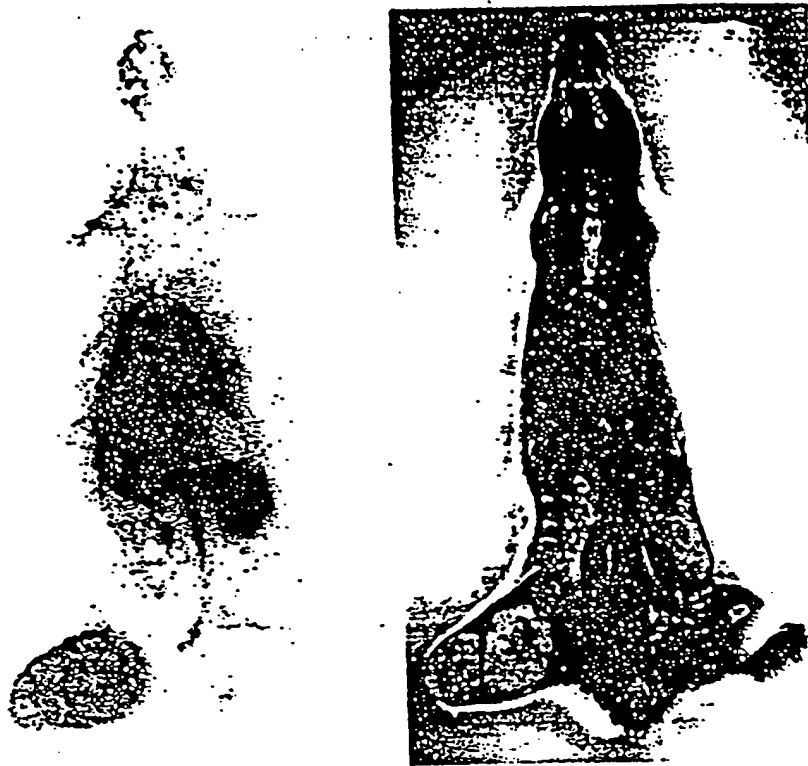


FIG. 12

3-10-1999

EC-(2-NIM)2 after adding serum 3:-

Date: Mar 10 1999
Data File:

Start time: 16:02

Run time: 00:00:50
Plate: 1 Lane: 1

Elect Resolution: NORMAL

(Amp. Range: 0 - 2047)

Stop counts: 50000

Stop Counts Region: 0.00 to 20.00 cm

Rf Calculations: Origin: 1.50 cm

Solvent Front: 19.00 cm

Integration Parameters: Auto Integration

Peak slope: 1.0

Min width: 0.1 Min %: 2.0

Total Count Region: 0.00cm to 20.00cm

Total Counts: 53170

Total CPM: 63810

Reg. #	Start (cm)	Stop (cm)	Center (cm)	Rf	Region Counts	Region CPM	% of Tot Reg	% of Tot Cnt
1	0.60	4.40	2.50	0.06	4557	5468	9.02	8.57
2	8.20	16.80	12.56	0.63	45980	55180	90.98	86.48
TOTAL					50540	60650	100.00	95.05

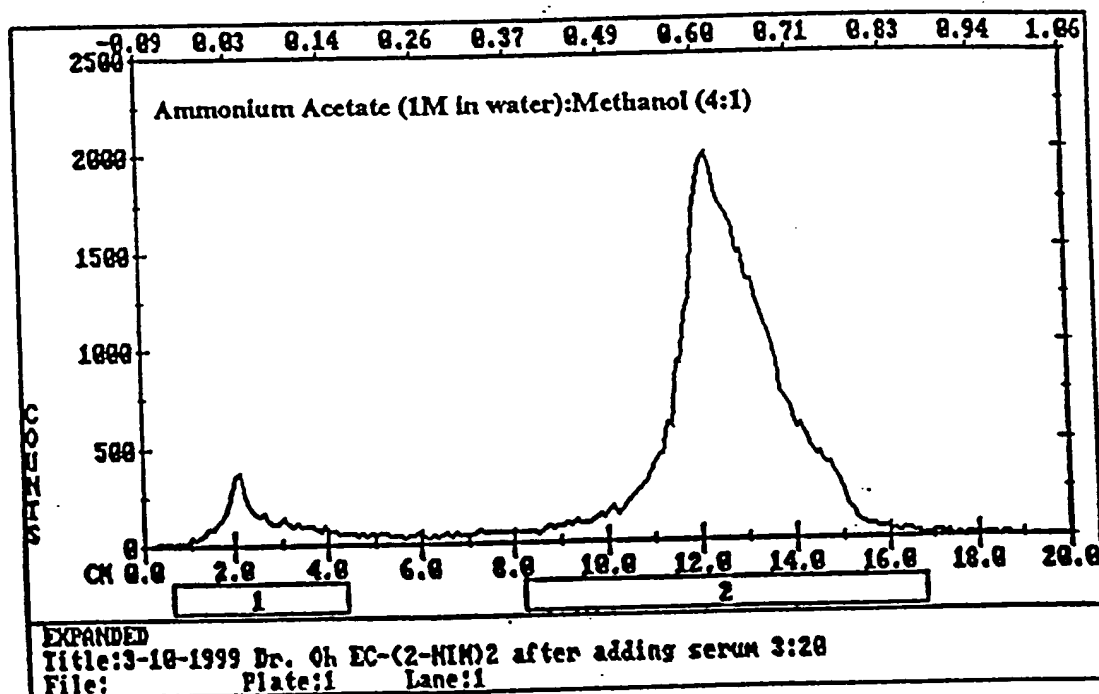


FIG. 13

DOT 250 - EST 655M

$^{99m}\text{Tc-EC-NIM}$

$^{99m}\text{Tc-EC}$

$^{99m}\text{Tc-EC-NIM}$

$^{99m}\text{Tc-EC}$

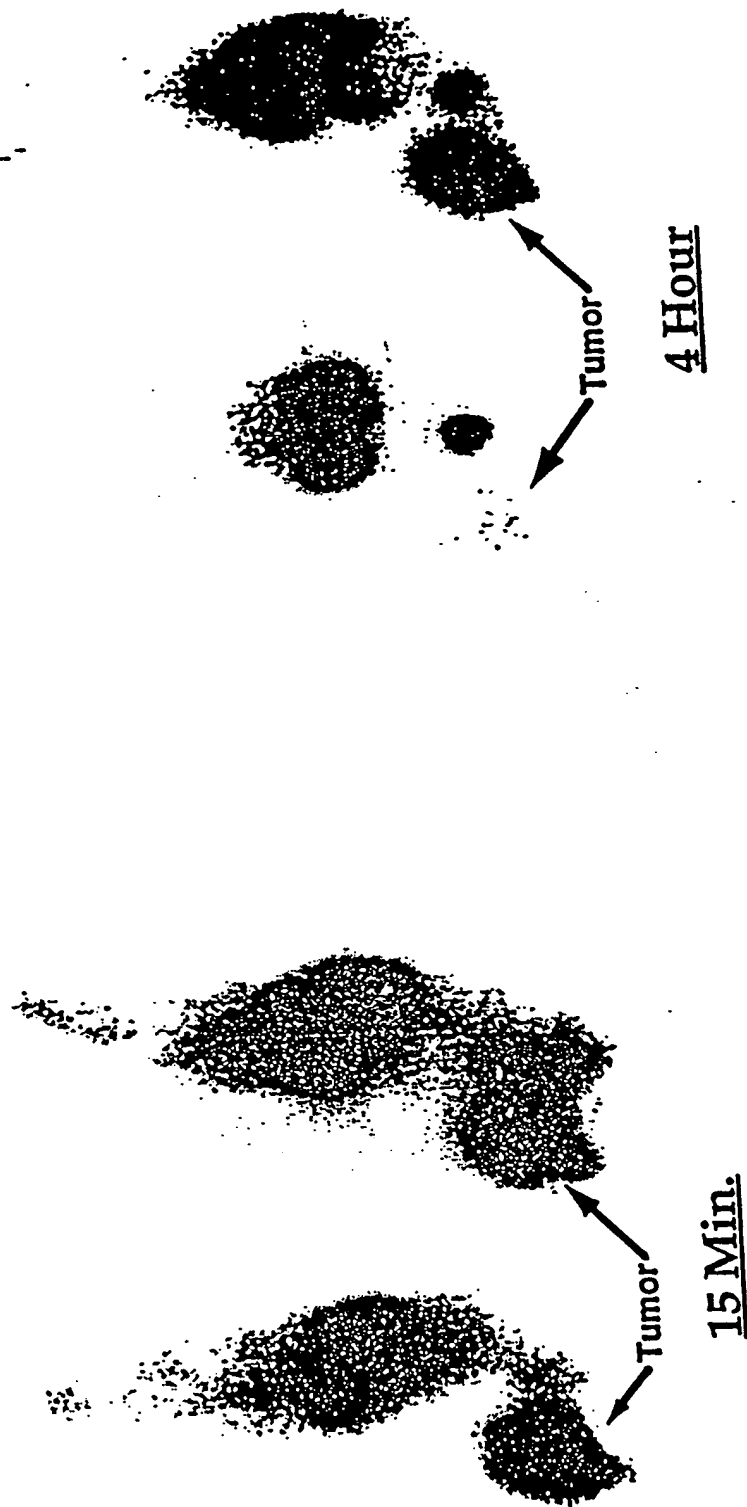


FIG. 14A

001250 25T5547

Paclitaxel Treated

No Treatment

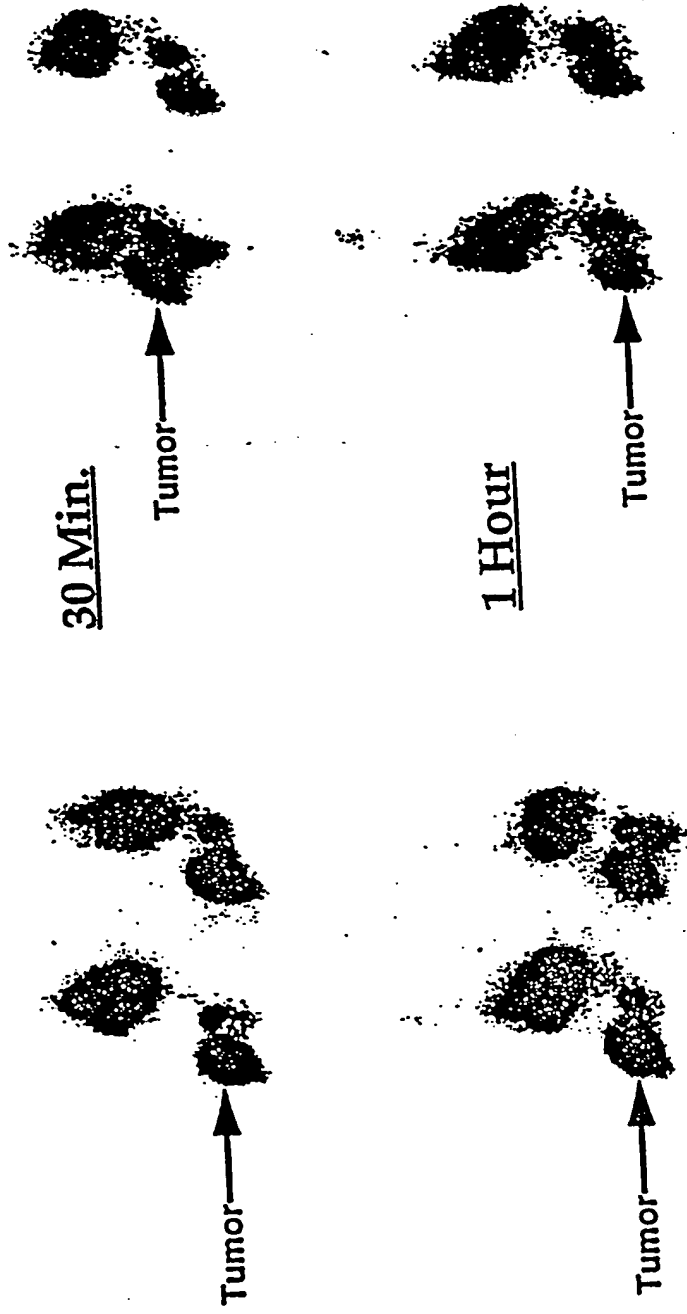


FIG. 14B

$^{99m}\text{Tc-EC-NIM}$



15 Min.

Tumor →

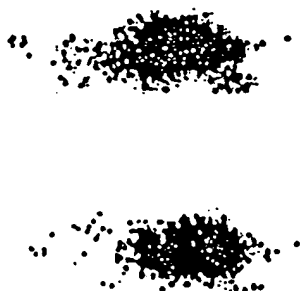
$^{99m}\text{Tc-EC-NIM}$



2 Hour

Tumor →

$^{99m}\text{Tc-EC}$



Tumor →

$^{99m}\text{Tc-EC}$



Tumor →

FIG. 15A

^{99m}Tc -EC-Nitroimidazole (NIM)
(100 μCi /mouse, iv.)

2 Hour

1 Hour

30 Min.

15 Min.

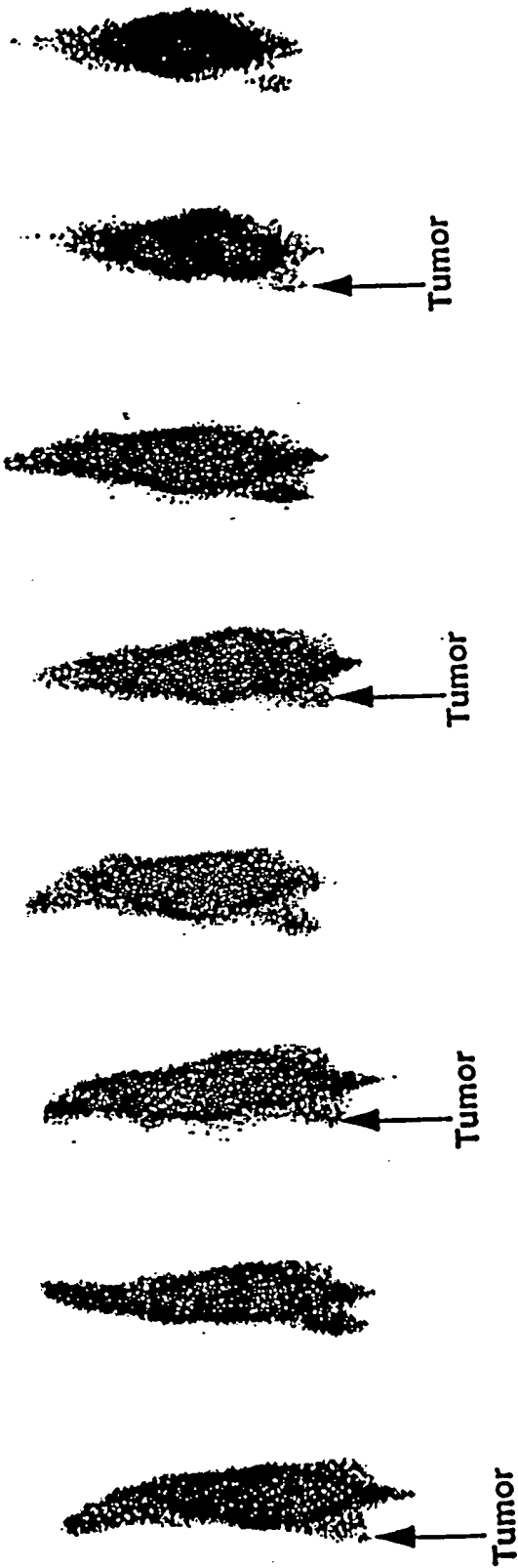


FIG. 15B

DOT 290-25T6540

^{99m}Tc -EC-Nitroimidazole (NIM)

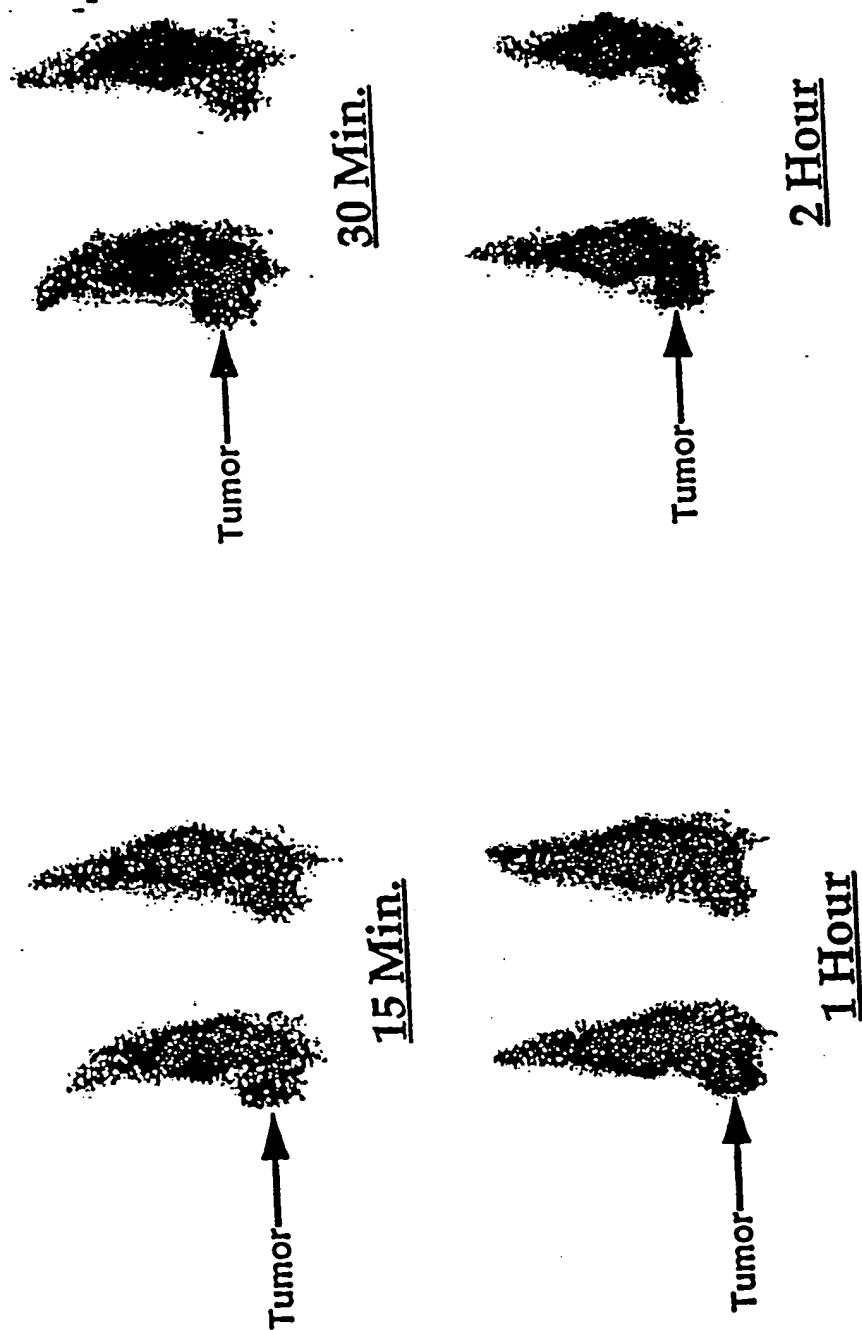


FIG. 15C

DOT-330-EST-0540

^{99m}Tc -EC-Nitroimidazole (NIM)
(100 μCi /mouse, iv.)

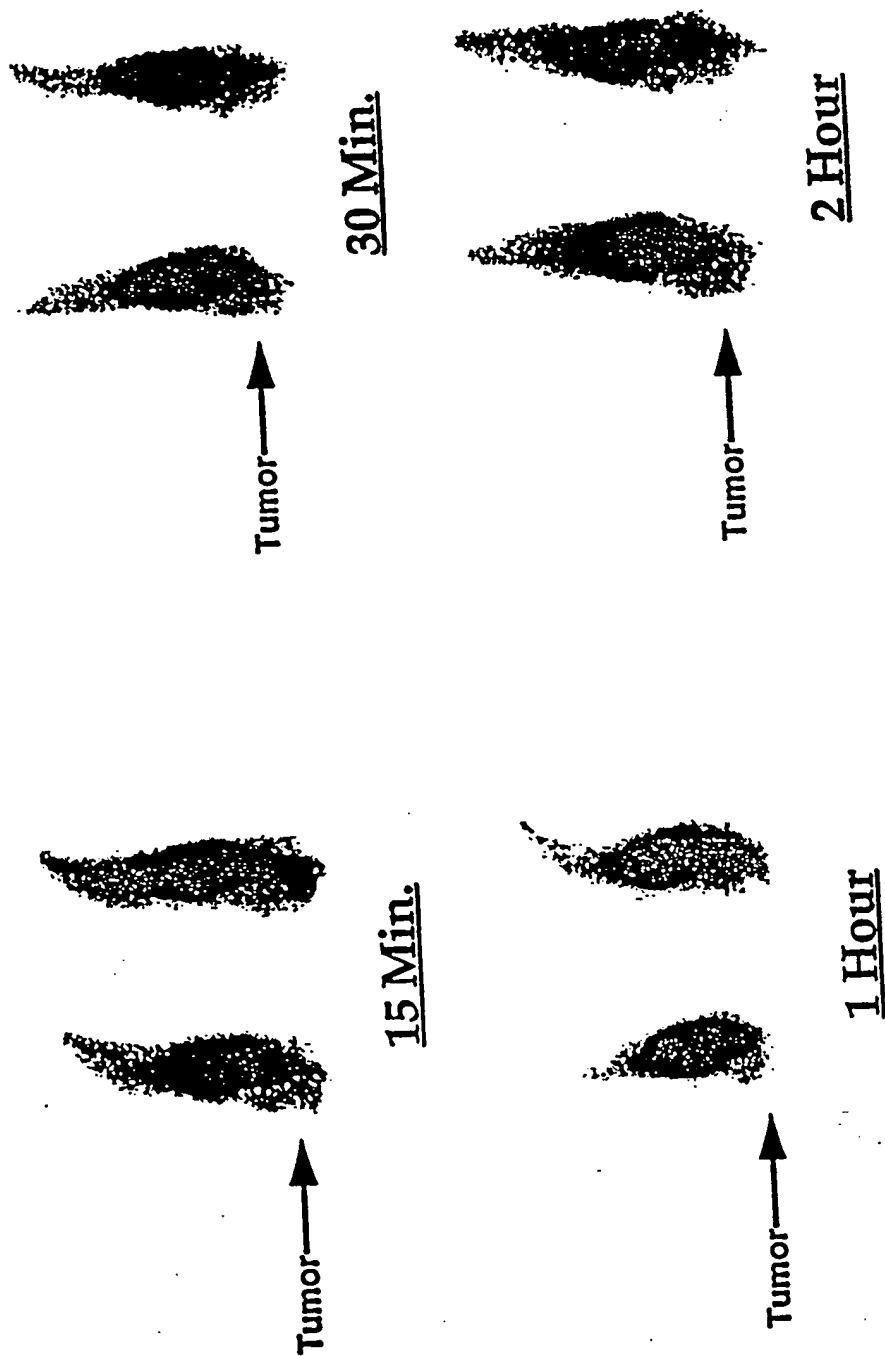


FIG. 15D

00Tc90:23T65k0

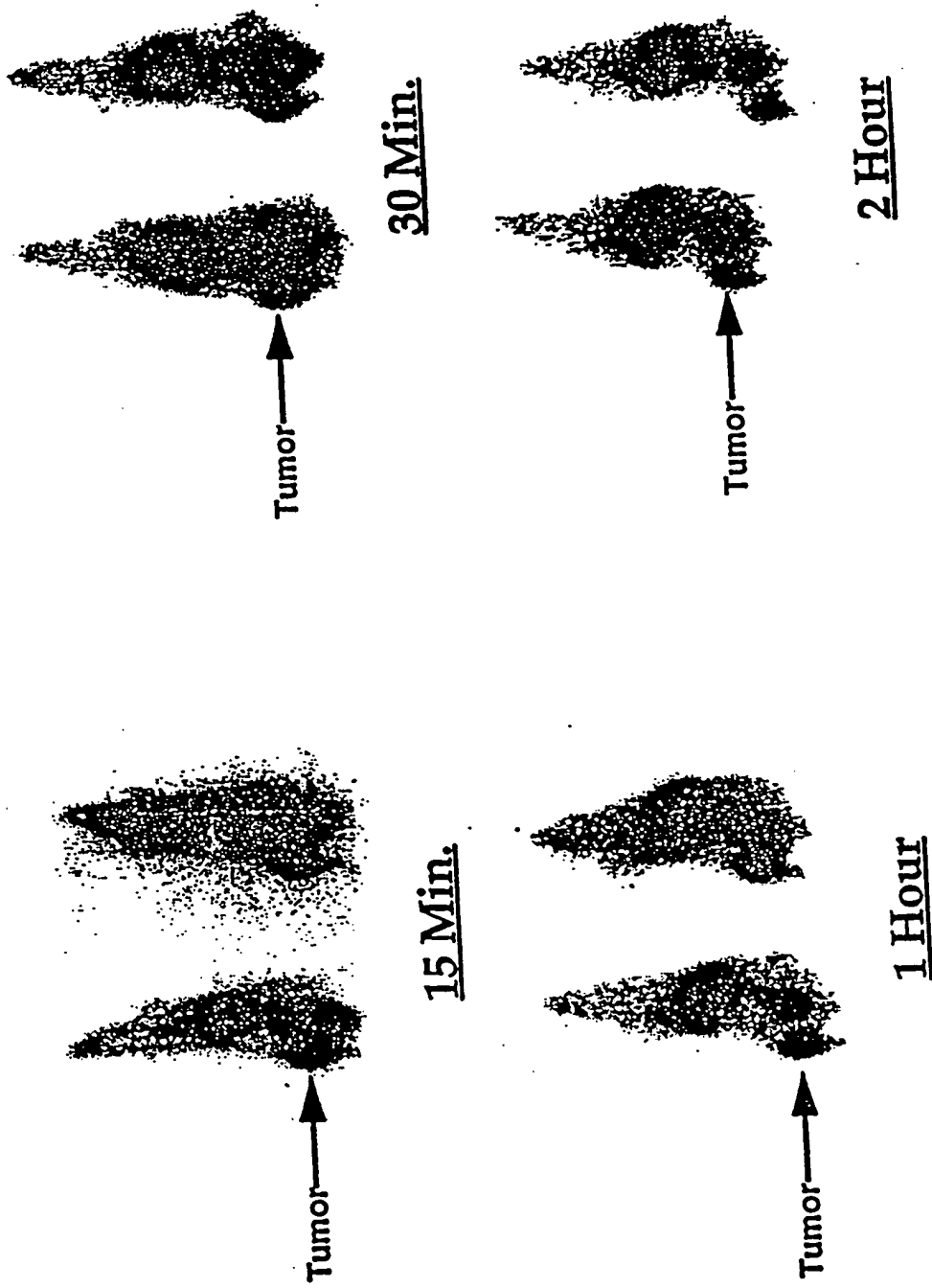
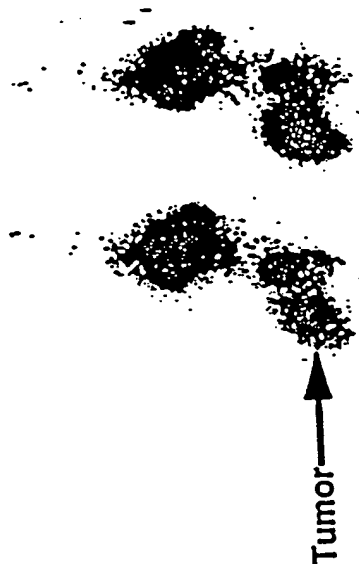


FIG. 17

004290-29766540

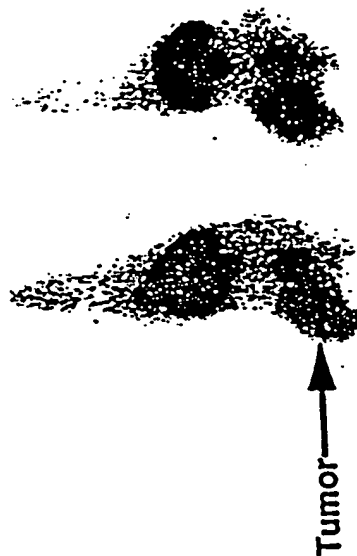
30 Min.



15 Min.



2 Hour



1 Hour



FIG. 18

001630-251650

30 Min.



Tumor—→

2 Hour



Tumor—→

15 Min.



Tumor—→

1 Hour



Tumor—→

FIG. 19A

007290-257650

^{99m}Tc -EC-Annexin V
(100 μCi /mouse, iv.)

2 Hour

1 Hour

30 Min.

15 Min.

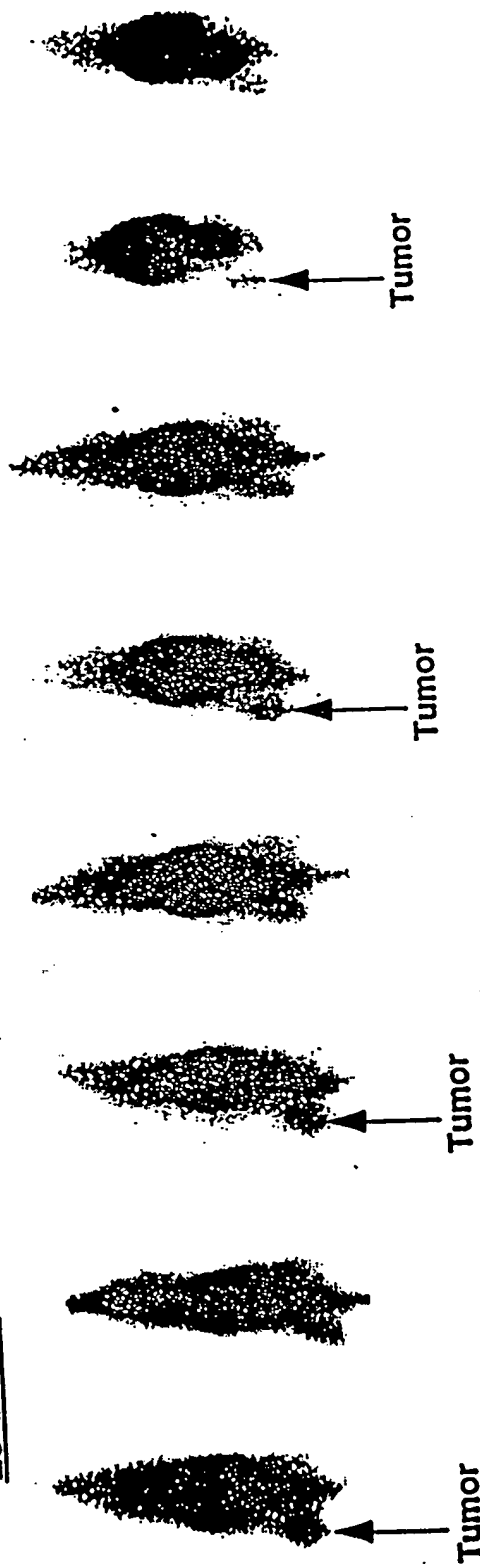


FIG. 19B

$^{99m}\text{Tc-EC-Annexin V}$

$^{99m}\text{Tc-EC}$

$^{99m}\text{Tc-EC-Annexin V}$

$^{99m}\text{Tc-EC}$

30 Min.

15 Min.

Tumor—→

Tumor—→

$^{99m}\text{Tc-EC-Annexin V}$

$^{99m}\text{Tc-EC}$

$^{99m}\text{Tc-EC-Annexin V}$

$^{99m}\text{Tc-EC}$

2 Hour

1 Hour

Tumor—→

FIG. 20A

004250-2576560

**^{99m}Tc -EC-Annexin V
(100 μCi /mouse, iv.)**

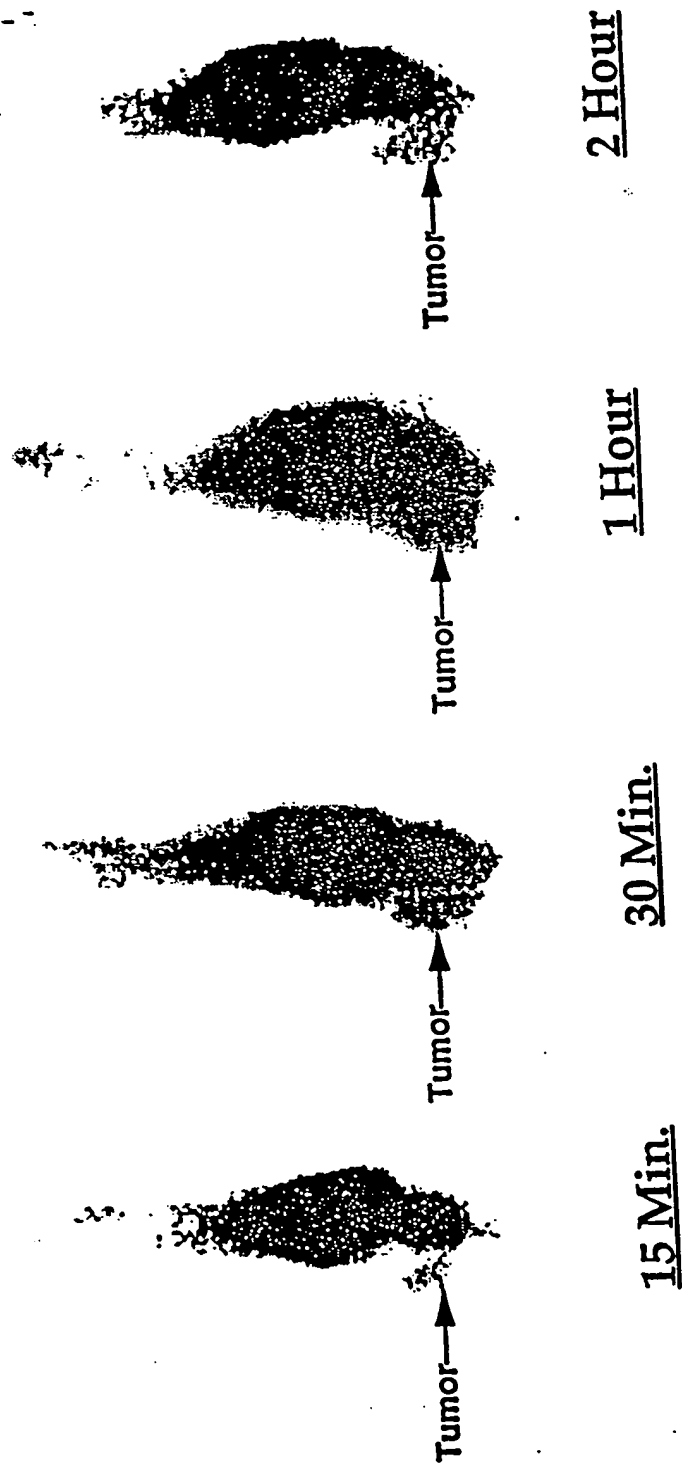


FIG. 20B

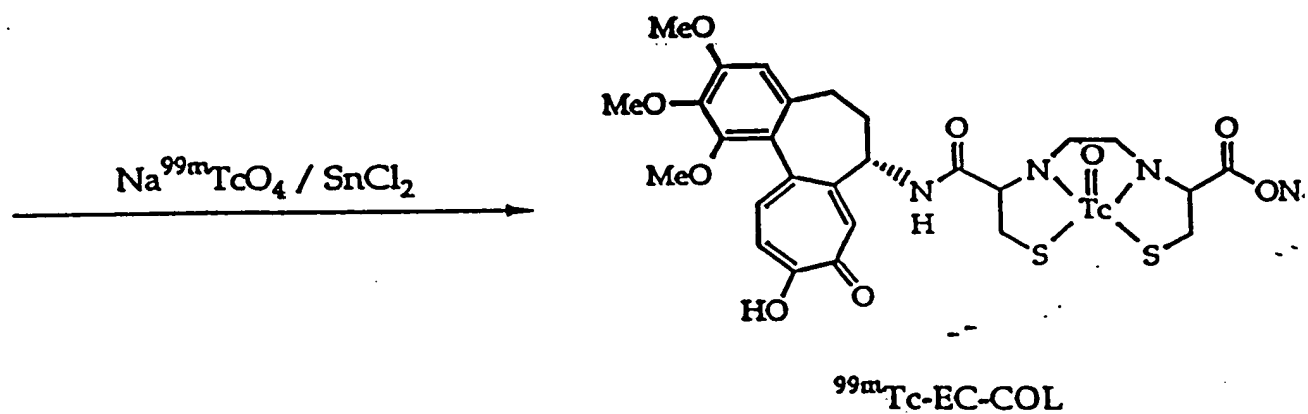
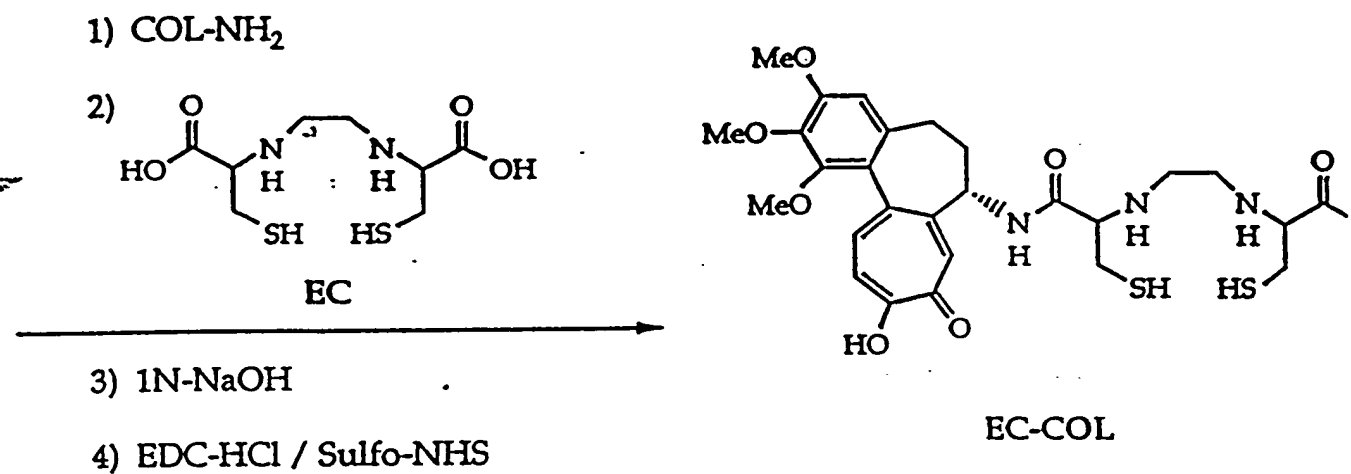
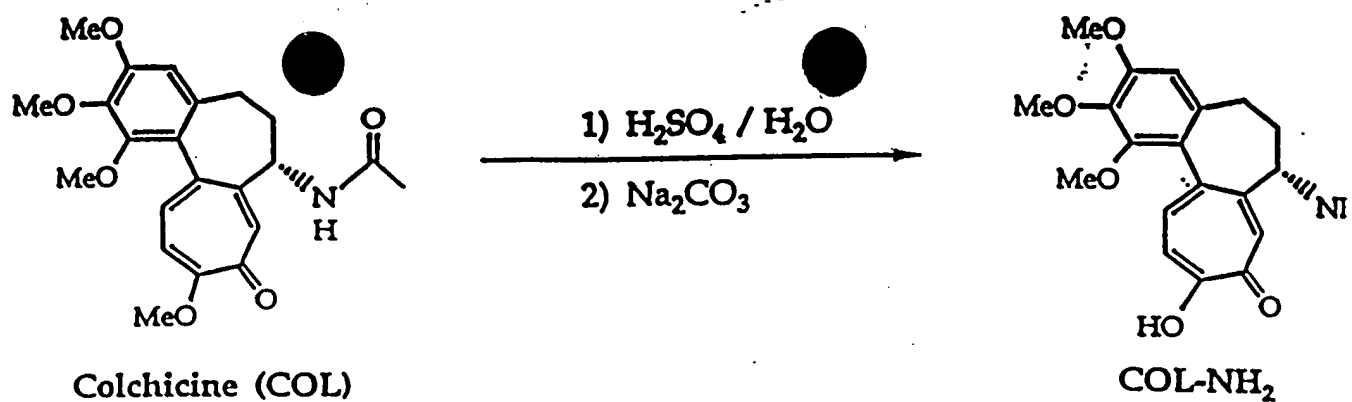


FIG. 21

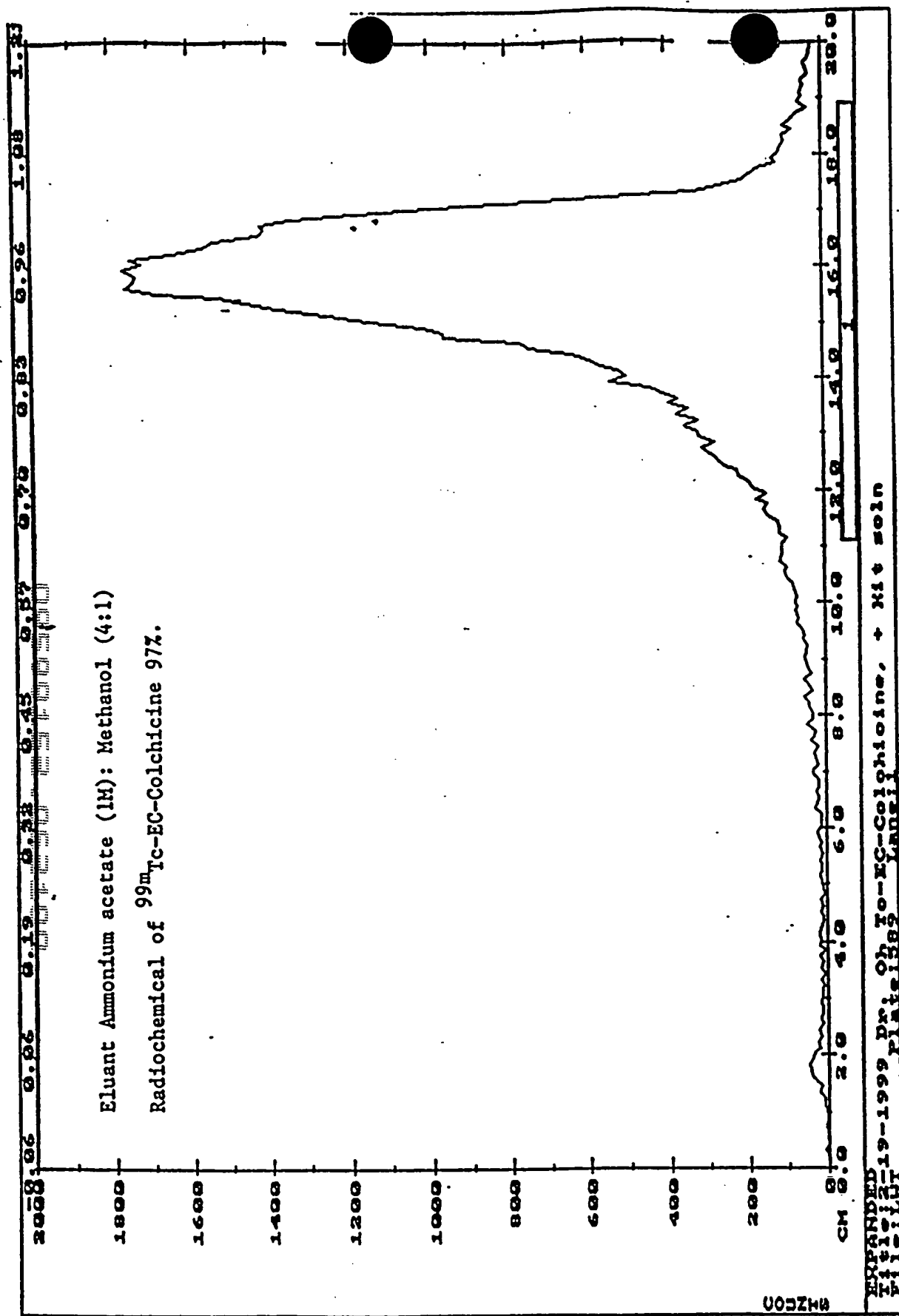


FIG. 22

Tumor-to-tissue Ratio

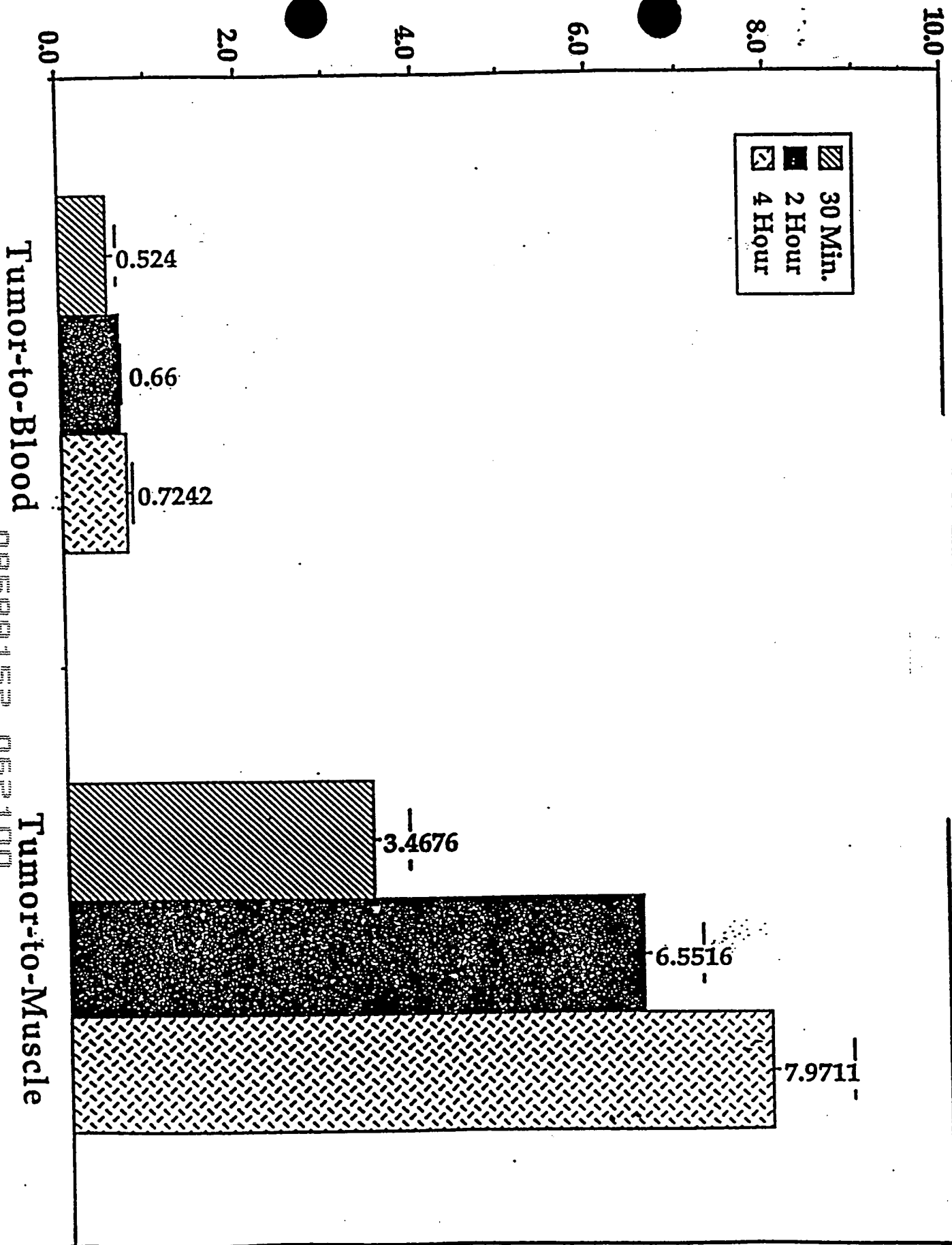


FIG. 23

Tumor-to-Tissue Ratio

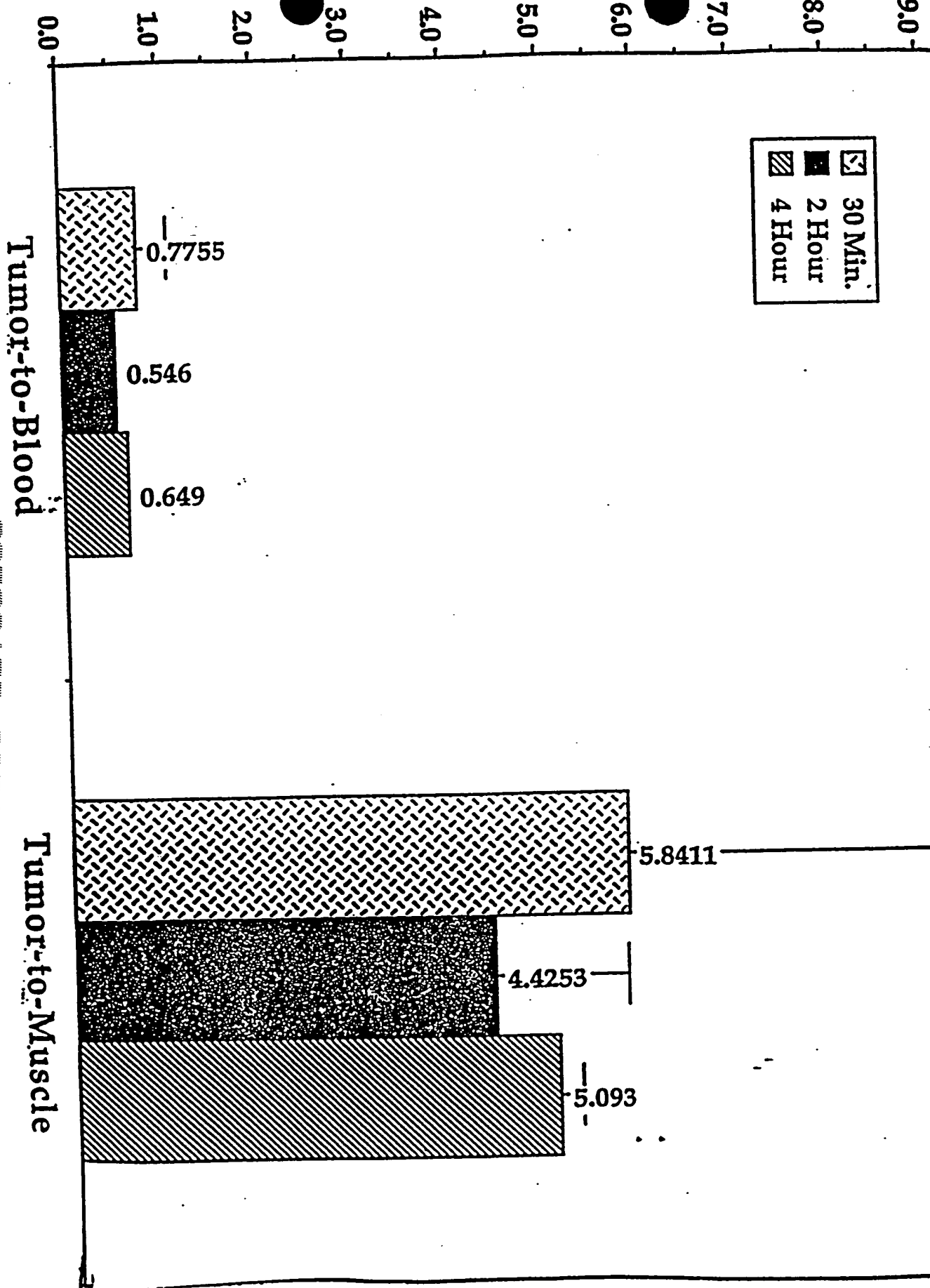


FIG. 24

^{99m}Tc-EC Colchicine (1 Hour Postinjection)



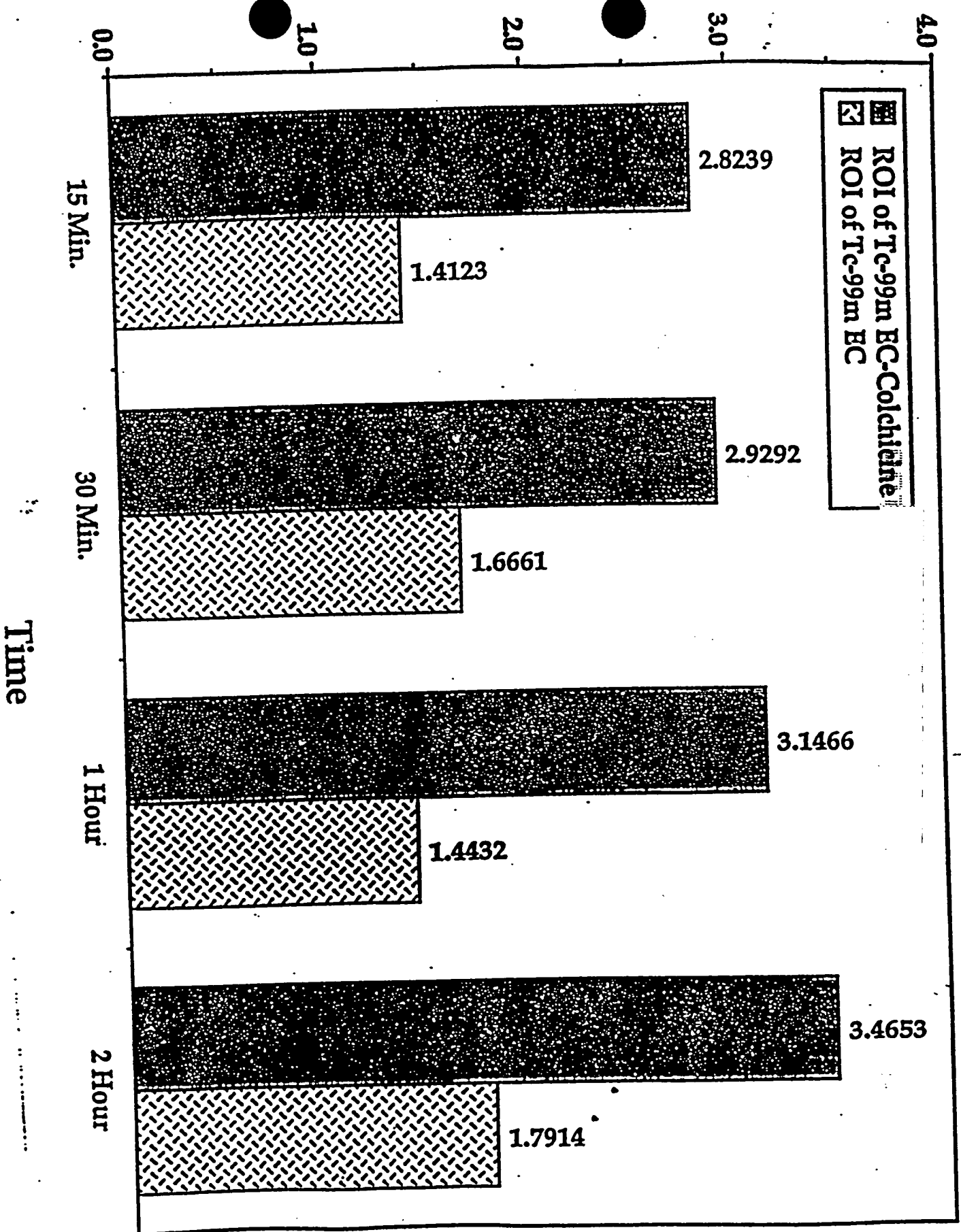
007290-23766560

FIG. 25

[illegible]

FIG. 26

Tumor-to-Background Ratio



DOT 250-EST 6560

FIG. 28

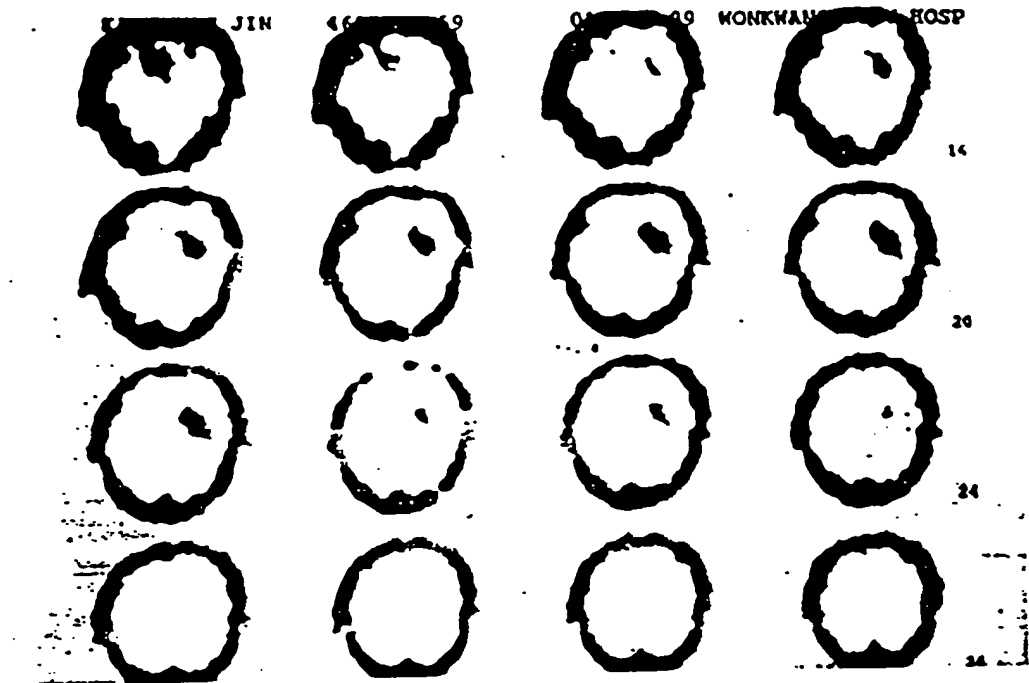


FIG. 29

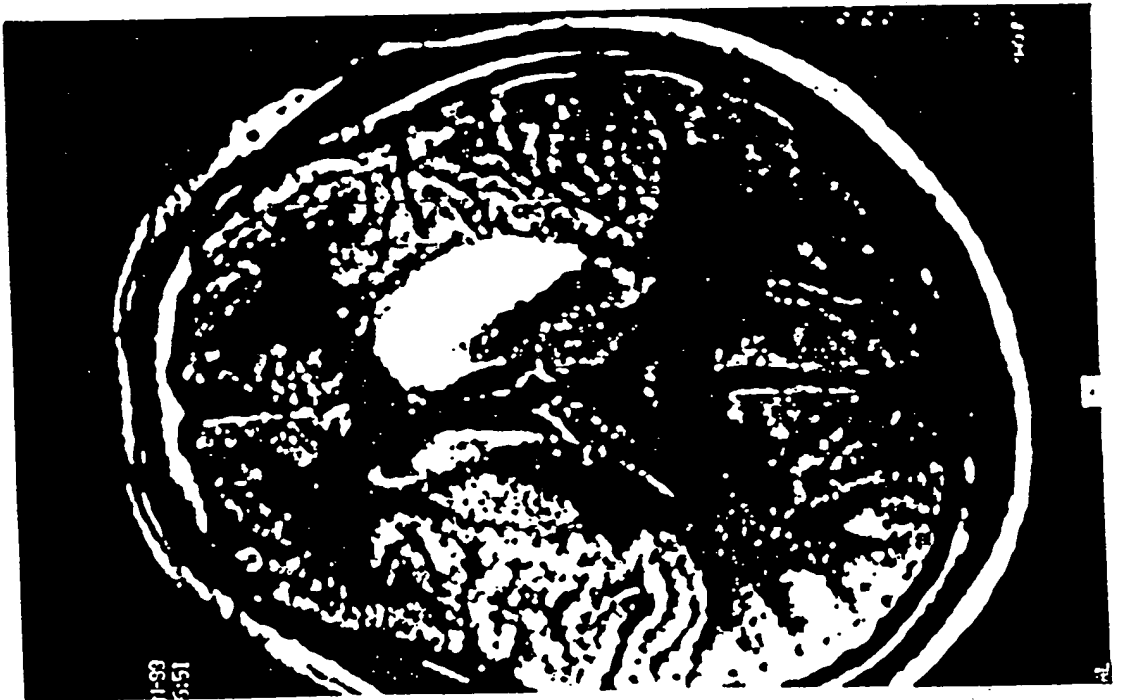


FIG. 30

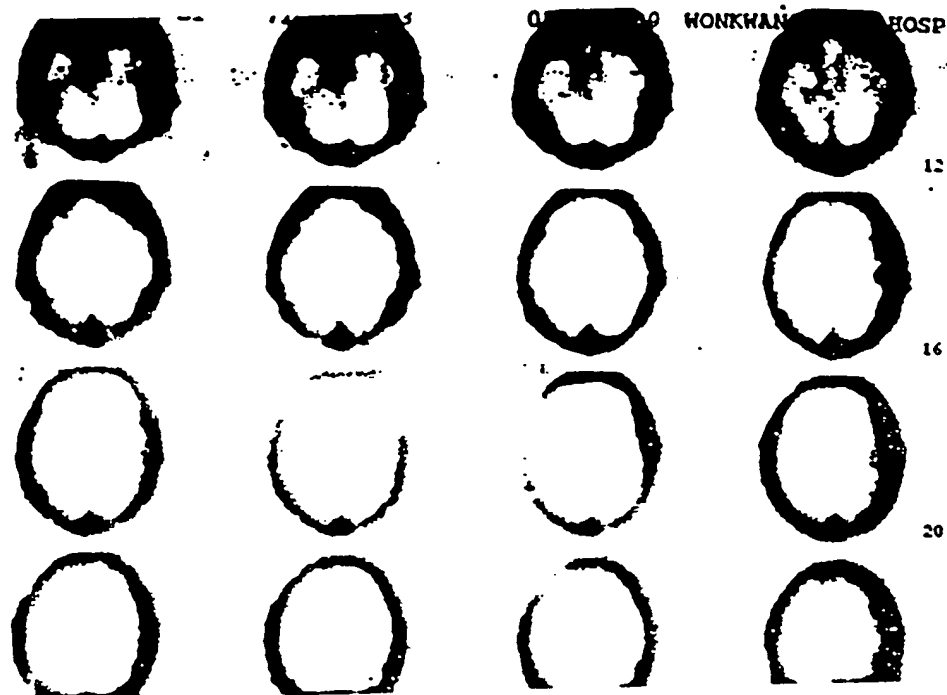
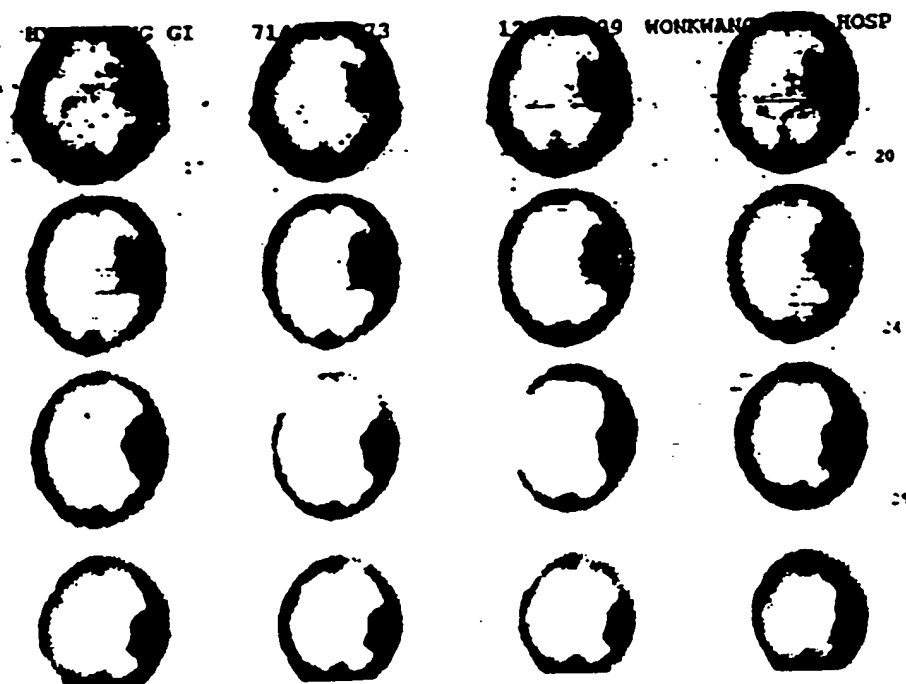


FIG. 31



001230-2316550



FIG. 32



FIG. 33

09599452-062400

001650-23100500

FIG. 34

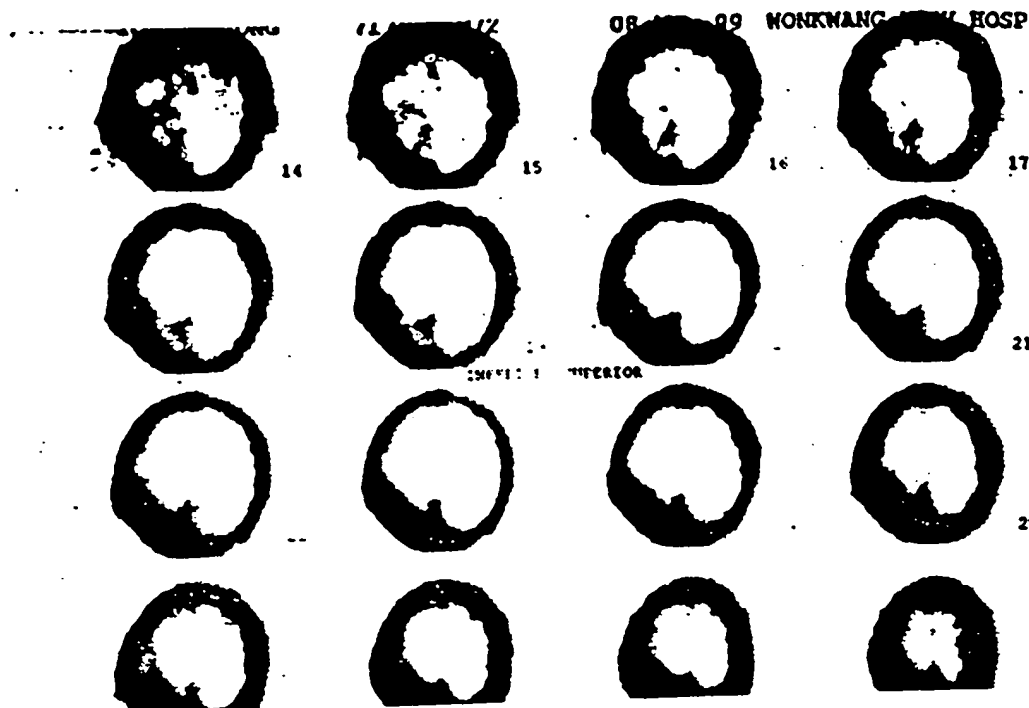


FIG. 35



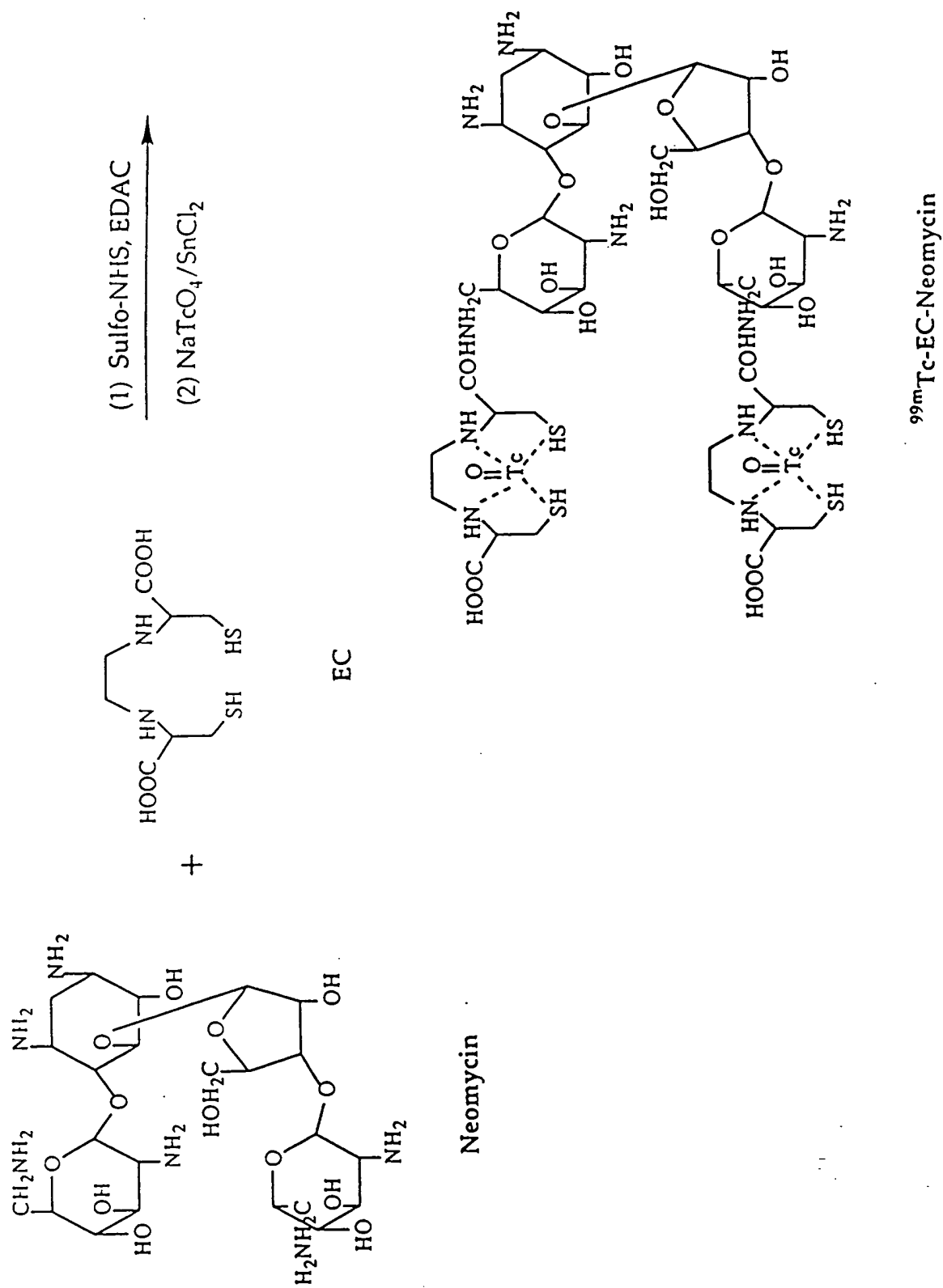
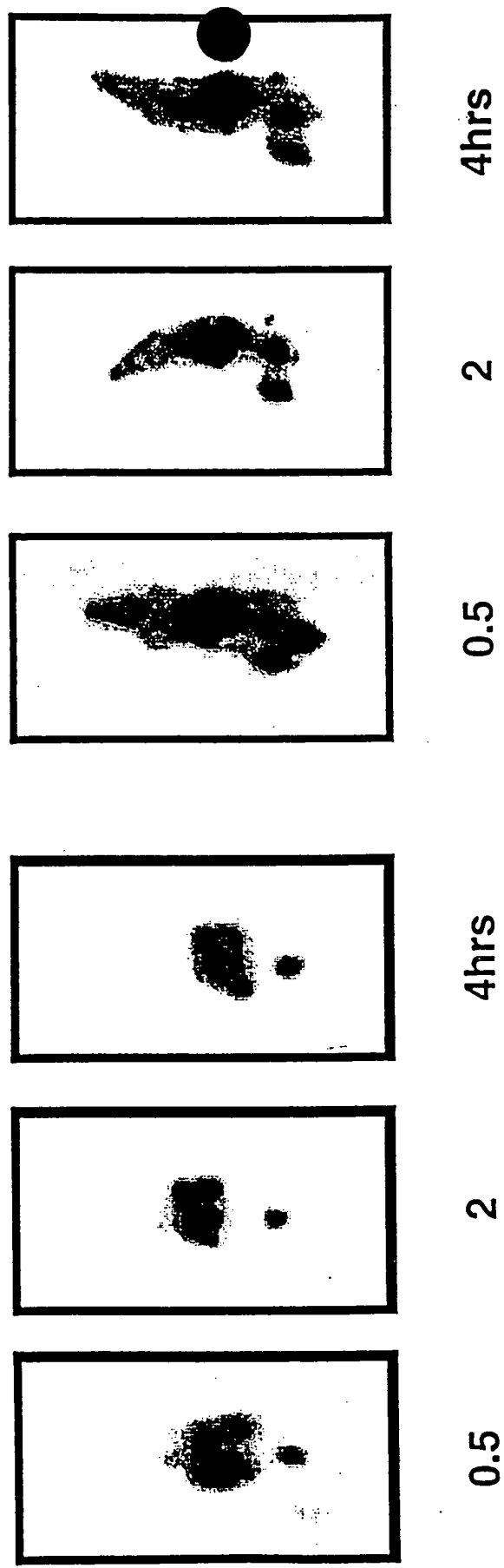


FIG. 36

Synthetic scheme of ^{99m}Tc -EC-neomycin.

99mTc-EC 99mTc-EC-Neomycin



Planar image of breast tumor-bearing rats after administration of ^{99m}Tc-EC and ^{99m}Tc-EC-Neomycin (100μCi/rat, iv.) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

FIG. 37A
Scintigraphic image of breast tumor-bearing rats after administration of ^{99m}Tc-EC and ^{99m}Tc-EC-neomycin (100 μCi/rat, iv.) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

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SCINTIMAMMOGRAPHY EC-NEO

LT LAT-2H

RT LAT-2H

LT LAT-2H

RT LAT-2H

FIG. 37B

Scintimammography with ^{99m}Tc -EC- neomycin (30 mCi, iv.) of a breast cancer patient. Images taken two hours post-injection.

EC

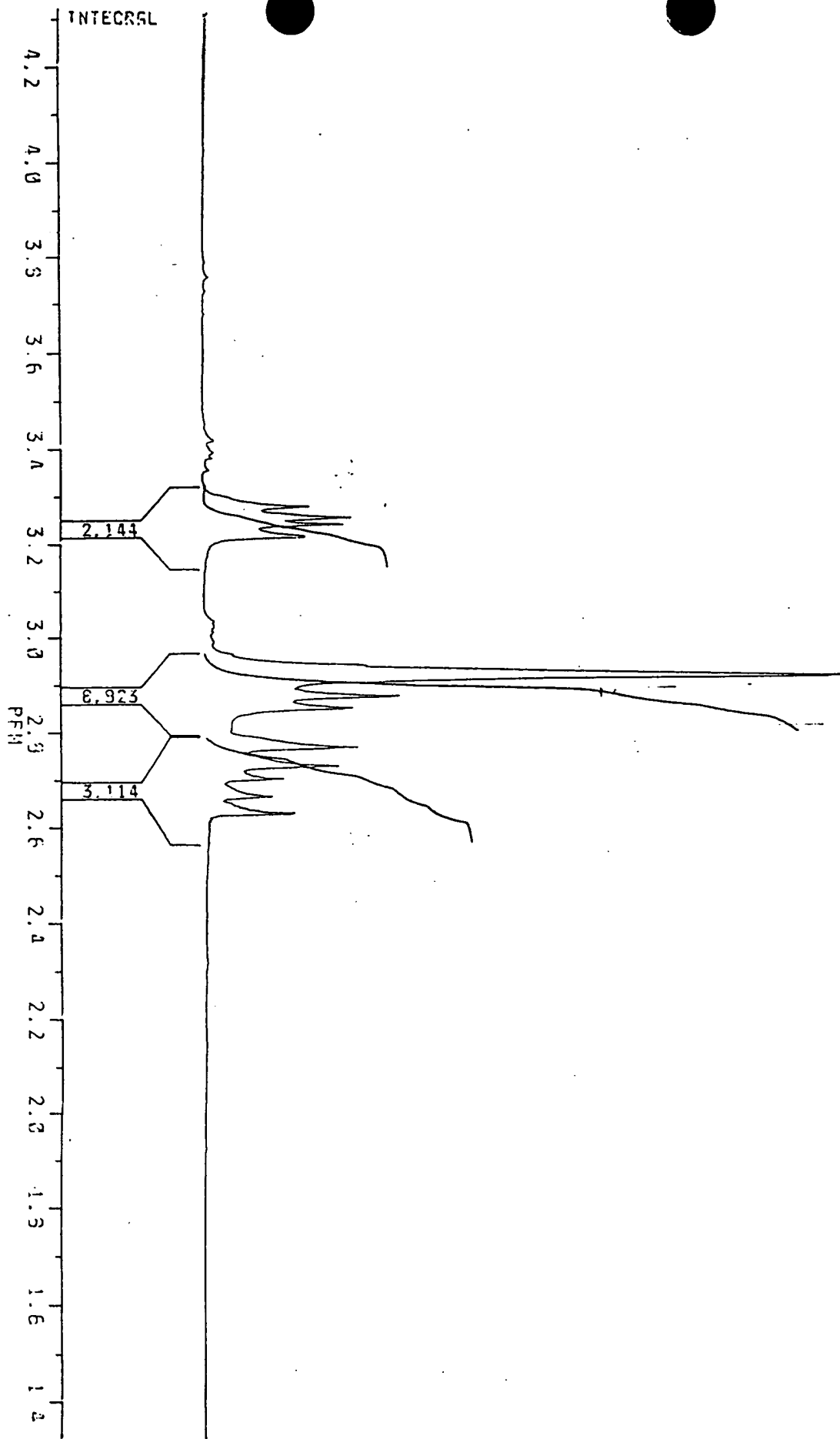


FIG. 38A

Neomycin

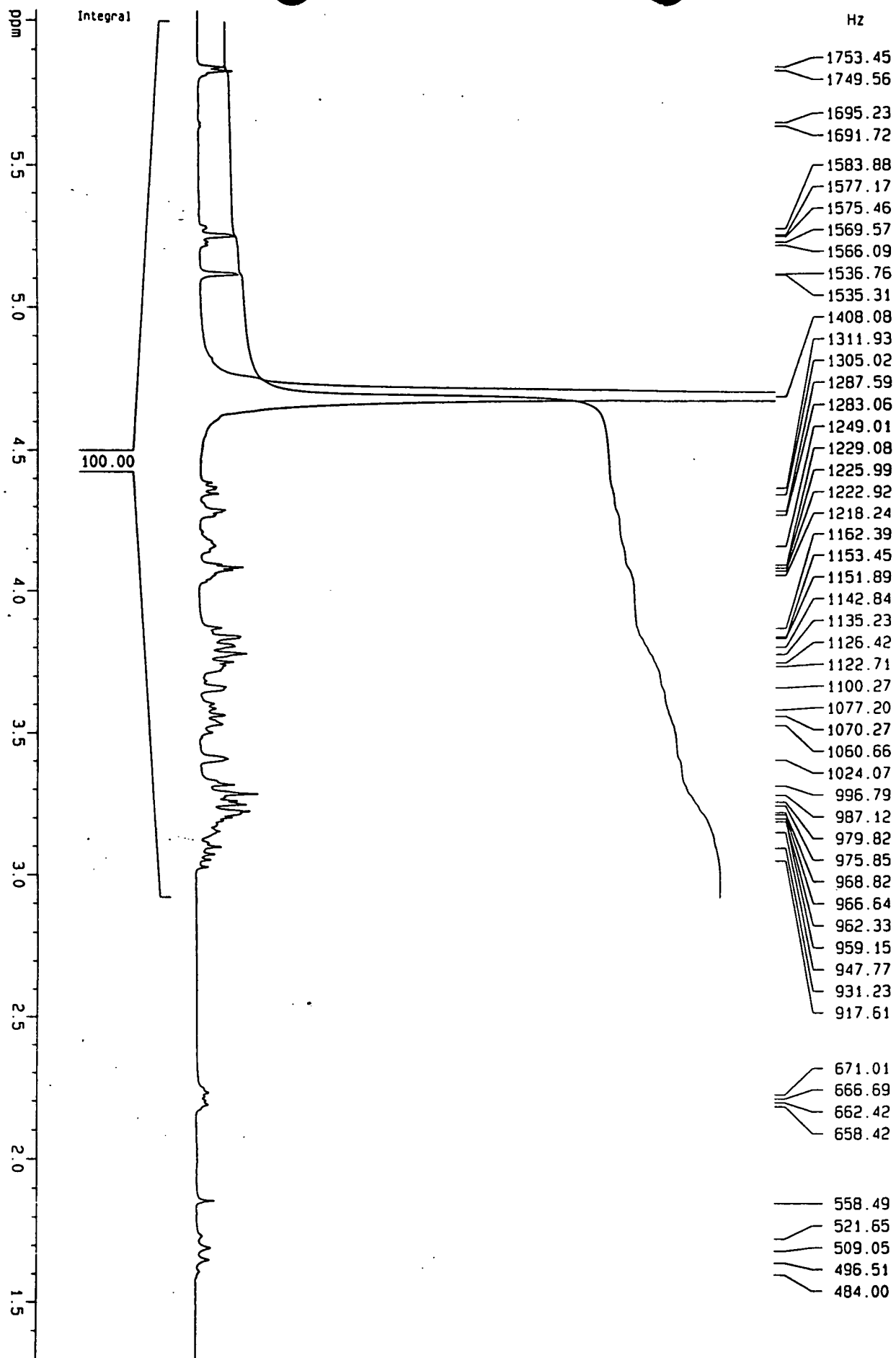


FIG. 38B

^1H -NMR of neomycin.

EC-Neomycin

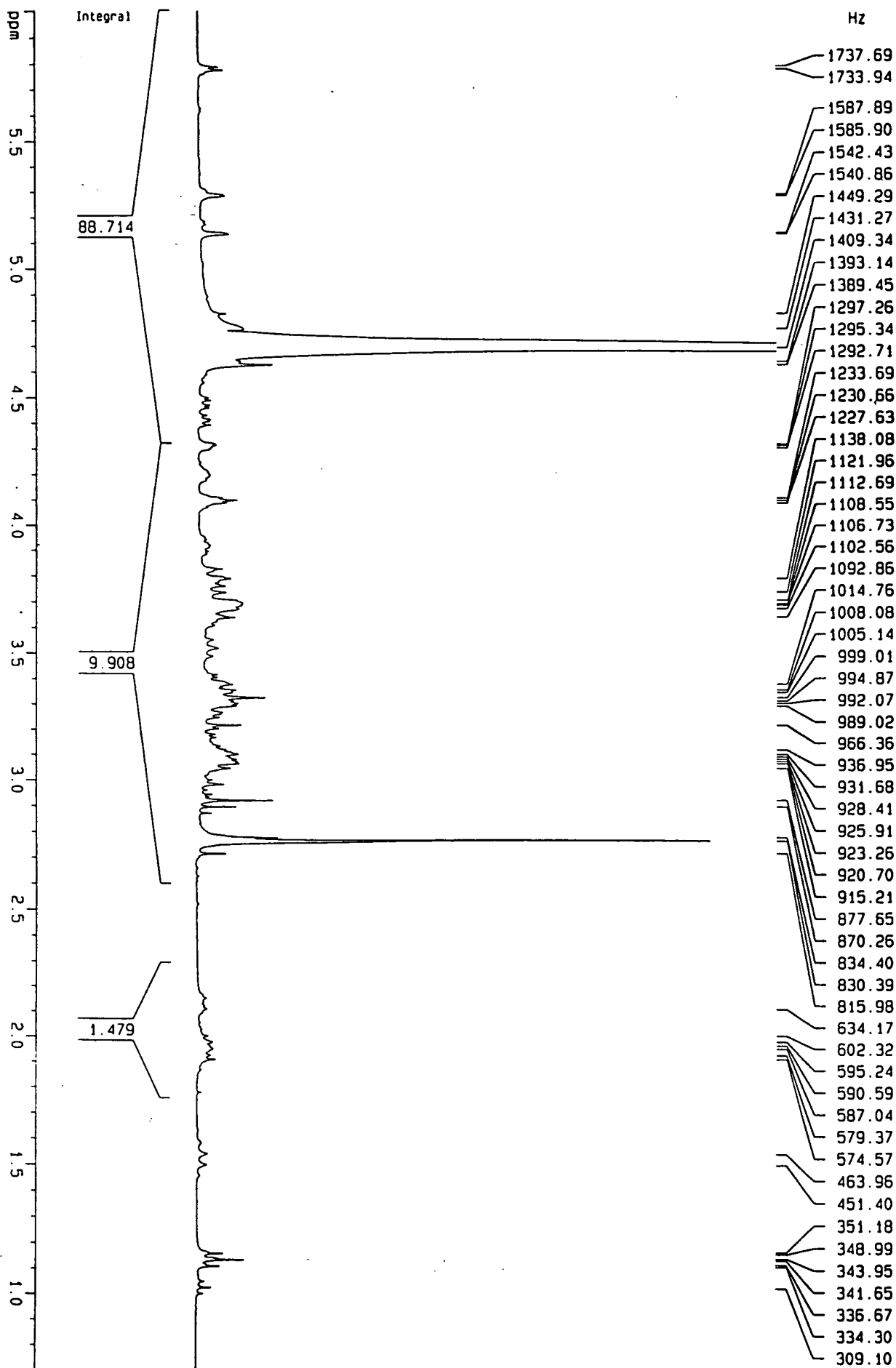
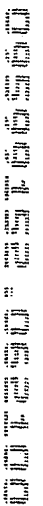


FIG. 38C

¹H-NMR of EC-neomycin.

Model	Number of parameters	Log-likelihood	AIC	BIC	Bayesian evidence	Model rank
Model 1	1	-100.00	202.00	202.00	0.0000	1
Model 2	2	-98.50	200.00	200.00	0.0000	2
Model 3	3	-97.50	198.00	198.00	0.0000	3
Model 4	4	-96.50	196.00	196.00	0.0000	4
Model 5	5	-95.50	194.00	194.00	0.0000	5
Model 6	6	-94.50	192.00	192.00	0.0000	6
Model 7	7	-93.50	190.00	190.00	0.0000	7
Model 8	8	-92.50	188.00	188.00	0.0000	8
Model 9	9	-91.50	186.00	186.00	0.0000	9
Model 10	10	-90.50	184.00	184.00	0.0000	10
Model 11	11	-89.50	182.00	182.00	0.0000	11
Model 12	12	-88.50	180.00	180.00	0.0000	12
Model 13	13	-87.50	178.00	178.00	0.0000	13
Model 14	14	-86.50	176.00	176.00	0.0000	14
Model 15	15	-85.50	174.00	174.00	0.0000	15
Model 16	16	-84.50	172.00	172.00	0.0000	16
Model 17	17	-83.50	170.00	170.00	0.0000	17
Model 18	18	-82.50	168.00	168.00	0.0000	18
Model 19	19	-81.50	166.00	166.00	0.0000	19
Model 20	20	-80.50	164.00	164.00	0.0000	20
Model 21	21	-79.50	162.00	162.00	0.0000	21
Model 22	22	-78.50	160.00	160.00	0.0000	22
Model 23	23	-77.50	158.00	158.00	0.0000	23
Model 24	24	-76.50	156.00	156.00	0.0000	24
Model 25	25	-75.50	154.00	154.00	0.0000	25
Model 26	26	-74.50	152.00	152.00	0.0000	26
Model 27	27	-73.50	150.00	150.00	0.0000	27
Model 28	28	-72.50	148.00	148.00	0.0000	28
Model 29	29	-71.50	146.00	146.00	0.0000	29
Model 30	30	-70.50	144.00	144.00	0.0000	30
Model 31	31	-69.50	142.00	142.00	0.0000	31
Model 32	32	-68.50	140.00	140.00	0.0000	32
Model 33	33	-67.50	138.00	138.00	0.0000	33
Model 34	34	-66.50	136.00	136.00	0.0000	34
Model 35	35	-65.50	134.00	134.00	0.0000	35
Model 36	36	-64.50	132.00	132.00	0.0000	36
Model 37	37	-63.50	130.00	130.00	0.0000	37
Model 38	38	-62.50	128.00	128.00	0.0000	38
Model 39	39	-61.50	126.00	126.00	0.0000	39
Model 40	40	-60.50	124.00	124.00	0.0000	40
Model 41	41	-59.50	122.00	122.00	0.0000	41
Model 42	42	-58.50	120.00	120.00	0.0000	42
Model 43	43	-57.50	118.00	118.00	0.0000	43
Model 44	44	-56.50	116.00	116.00	0.0000	44
Model 45	45	-55.50	114.00	114.00	0.0000	45
Model 46	46	-54.50	112.00	112.00	0.0000	46
Model 47	47	-53.50	110.00	110.00	0.0000	47
Model 48	48	-52.50	108.00	108.00	0.0000	48
Model 49	49	-51.50	106.00	106.00	0.0000	49
Model 50	50	-50.50	104.00	104.00	0.0000	50
Model 51	51	-49.50	10			



```

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Mass spectrometry of EC-neomycin (M^+ 1112.55).

UV Wavelength Scan of EC

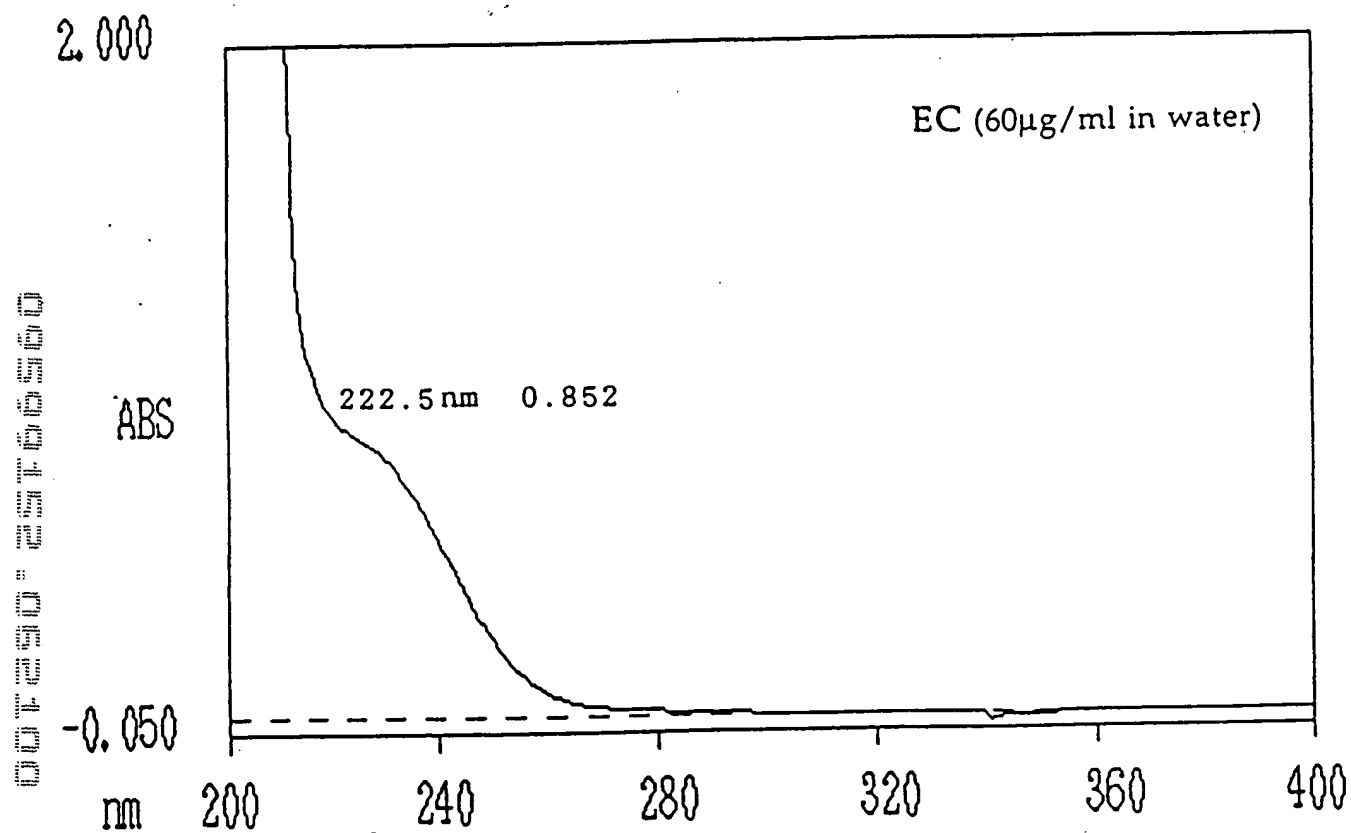


FIG. 40A

UV wavelength scan of EC.

UV Wavelength Scan of Neomycin

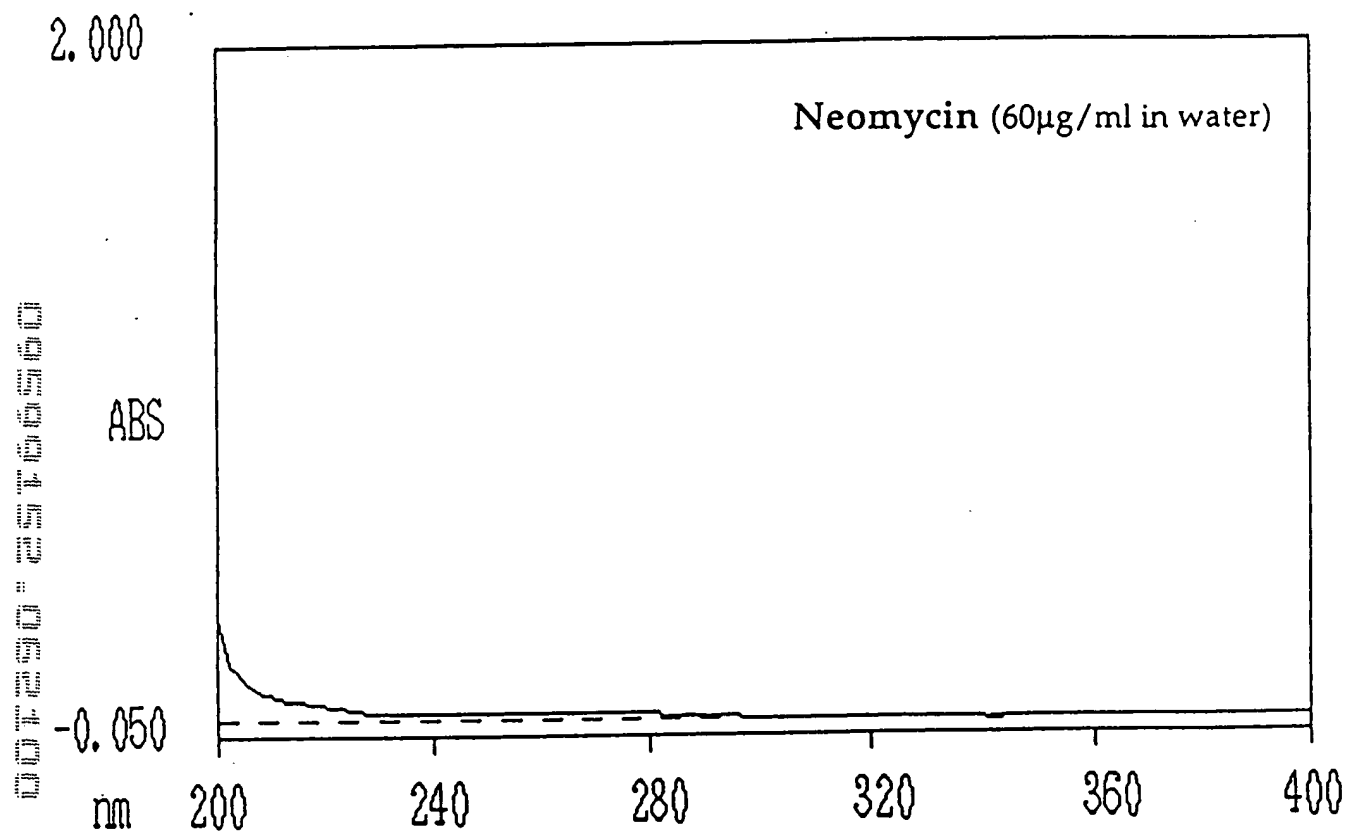


FIG. 40B

UV wavelength scan of neomycin.

UV Wavelength Scan of EC-Neomycin

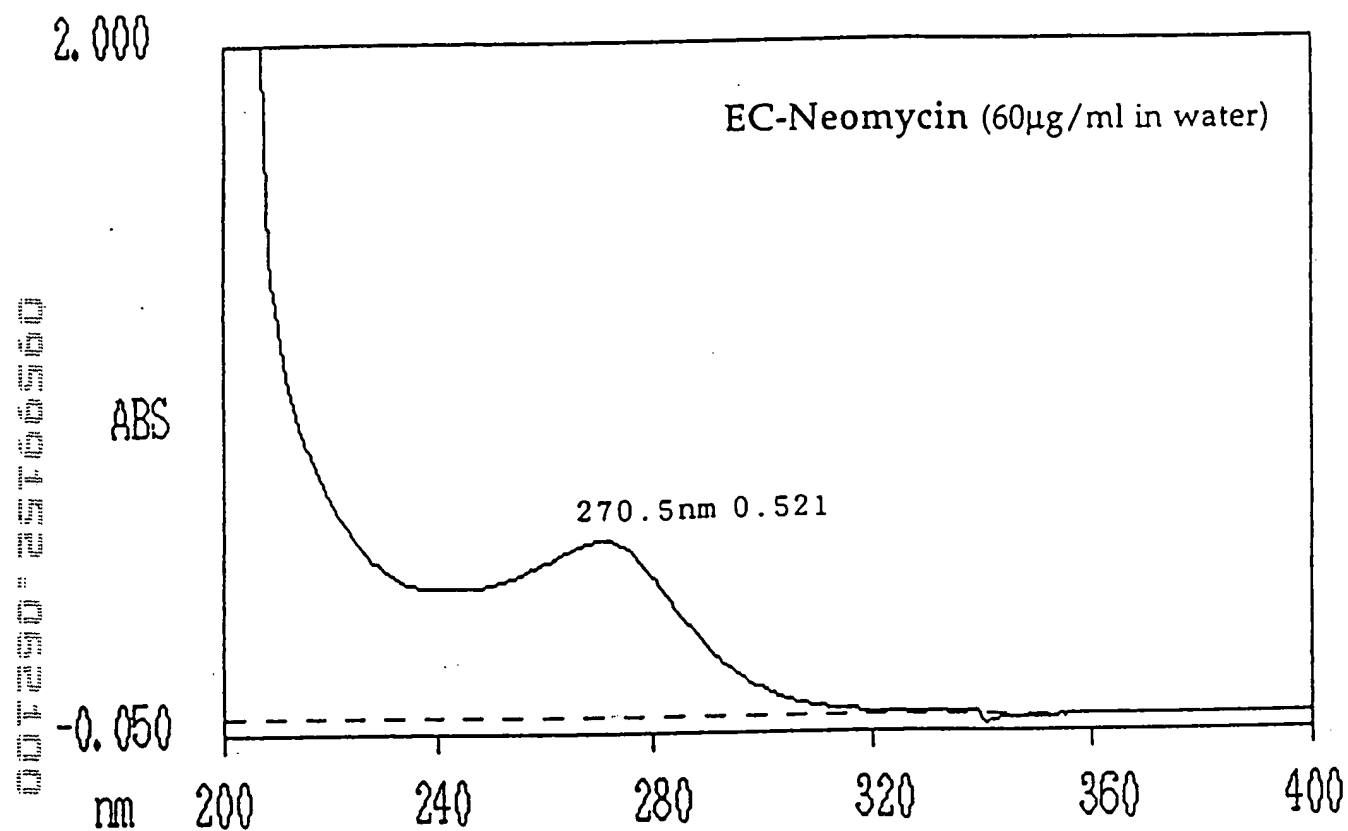


FIG. 40C

UV wavelength scan of EC-neomycin.

EC-NEOMYCIN 30mg + EC

Tc-99m

METHANOL-AMMONIUM ACETATE

Date: Feb 03 2000

Start time: 12:45

Accum time: 00:03:01

Data File:

Plate: 1 Lane: 1

Elect Resolution: NORMAL

(Amp. Range: 0 - 2047)

Rf Calculations: Origin: 0.00 cm

Solvent Front: 20.00 cm

Integration Parameters: Auto Integration

Peak slope: 1.0

Min width: 0.1

Min %: 2.0

Total Count Region: 0.00cm to 20.00cm

Total Counts: 48360

Total CPM: 16030

Reg. #	Start (cm)	Stop (cm)	Center (cm)	Rf	Region Counts	Region CPM	% of Tot Reg	% of Tot Cnt
1	6.50	14.90	10.57	0.53	45000	14920	100.00	93.05
TOTAL					45000	14920	100.00	93.05

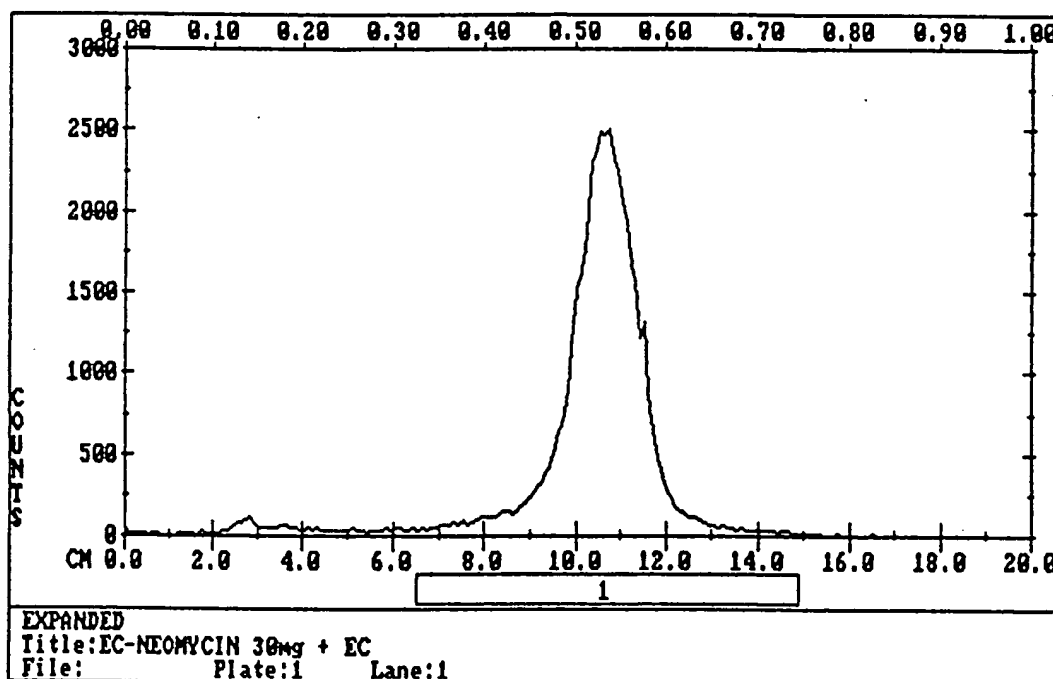


FIG. 41

Radio-TLC analysis of ^{99m}Tc -EC-neomycin.

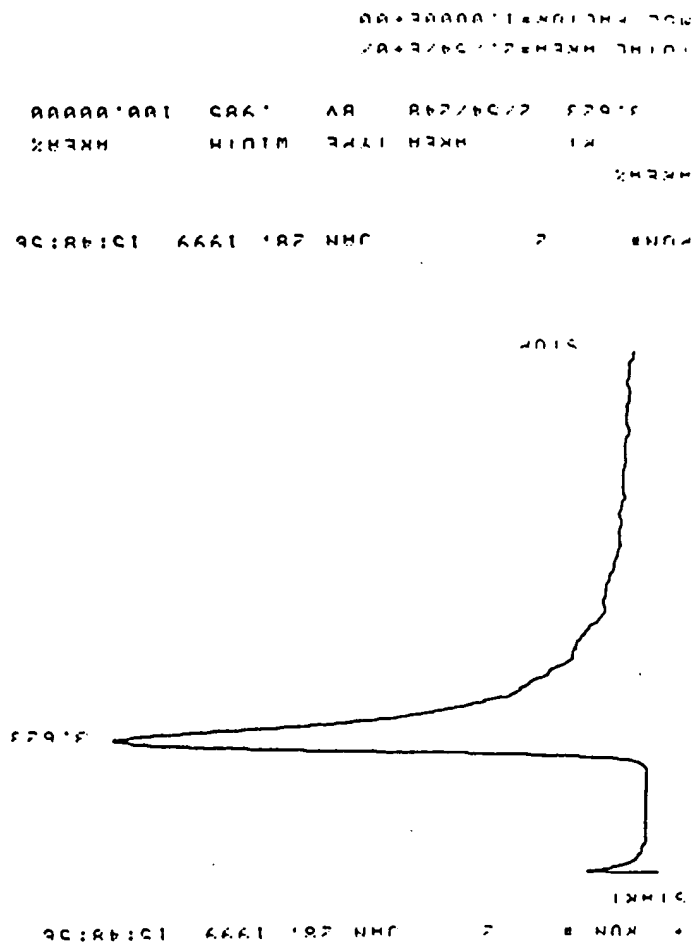
Variable	Mean	Standard Deviation	Minimum	Maximum
Age	34.5	10.2	22	55
Gender	0.5	0.5	0	1
Marital Status	0.6	0.5	0	1
Education	12.5	1.5	10	16
Income	3500	1500	1000	8000
Health	0.8	0.2	0	1
Smoking	0.3	0.5	0	1
Alcohol	0.2	0.4	0	1
Exercise	0.4	0.5	0	1
Stress	0.6	0.5	0	1
Sleep	0.7	0.3	0	1
Diet	0.5	0.5	0	1
Work	0.8	0.2	0	1
Family	0.6	0.5	0	1
Friends	0.7	0.4	0	1
Hobbies	0.5	0.5	0	1
Travel	0.4	0.5	0	1
Shopping	0.6	0.5	0	1
Reading	0.5	0.5	0	1
TV	0.7	0.4	0	1
Music	0.6	0.5	0	1
Gardening	0.4	0.5	0	1
Cooking	0.5	0.5	0	1
Volunteering	0.3	0.5	0	1
Religion	0.6	0.5	0	1
Politics	0.4	0.5	0	1
Environment	0.5	0.5	0	1
Technology	0.7	0.4	0	1
Art	0.4	0.5	0	1
Sports	0.5	0.5	0	1
Traveling	0.6	0.5	0	1
Learning	0.5	0.5	0	1
Working	0.8	0.2	0	1
Retiring	0.3	0.5	0	1
Living	0.6	0.5	0	1
Dying	0.4	0.5	0	1

Eluent: H₂O

Flow Rate: 0.4ml/min

Detector: Radiochemical

Temp: 85.0°C



HPLC analysis of ^{99m}Tc -EC-neomycin (radioactive detector).

^{99m}Tc-EC-NEO

Column: Bio-Rad Carbohydrate, Aminex HPX-87C, 250x4mm

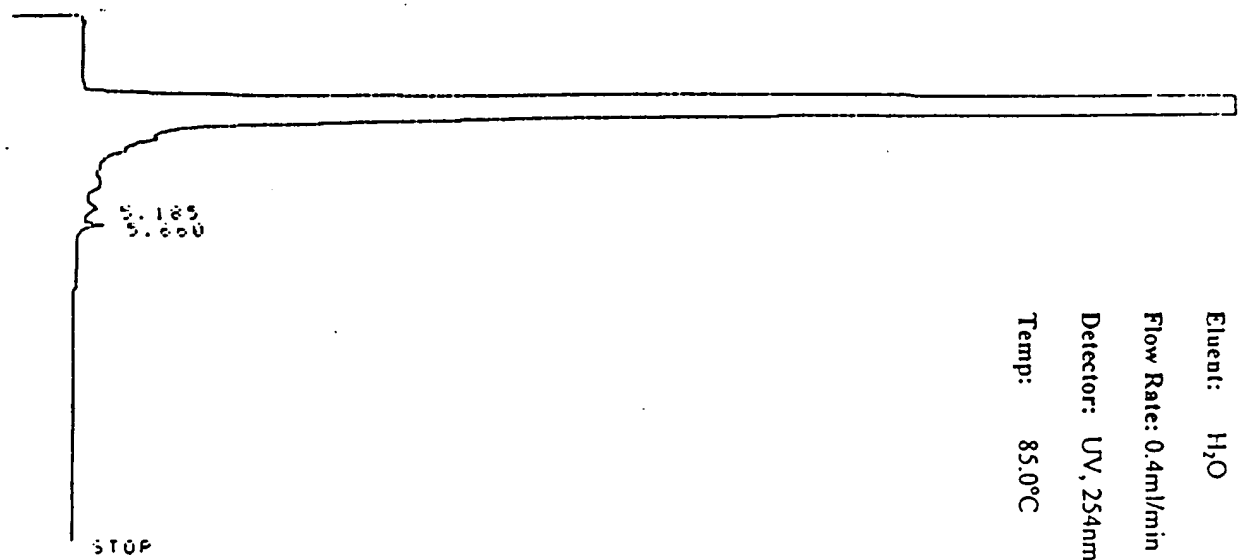
Eluent: H₂O

Flow Rate: 0.4ml/min

Detector: UV, 254nm

Temp: 85.0°C

RUN # 2 JAN 28, 1999 00:54:29
START



RUN # 2 JAN 28, 1999 00:54:29

RT	AREA	TYPE	WIDTH	AREA%
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5.185	392604	BV	.265	.15126
5.260	355901	VB	.132	.13712

TOTAL AREA=3.5955E+08
MUL FACTOR=1.0000E+00

FIG. 43 HPLC analysis of ^{99m}Tc-EC-neomycin (UV 254 nm).

Column: Bio-Rad Carbohydrate,
Aminex HPX-87C, 250x4mm

Flow Rate: 0.4ml/min

Detector: Radiochemical

Temp: 85.0°C

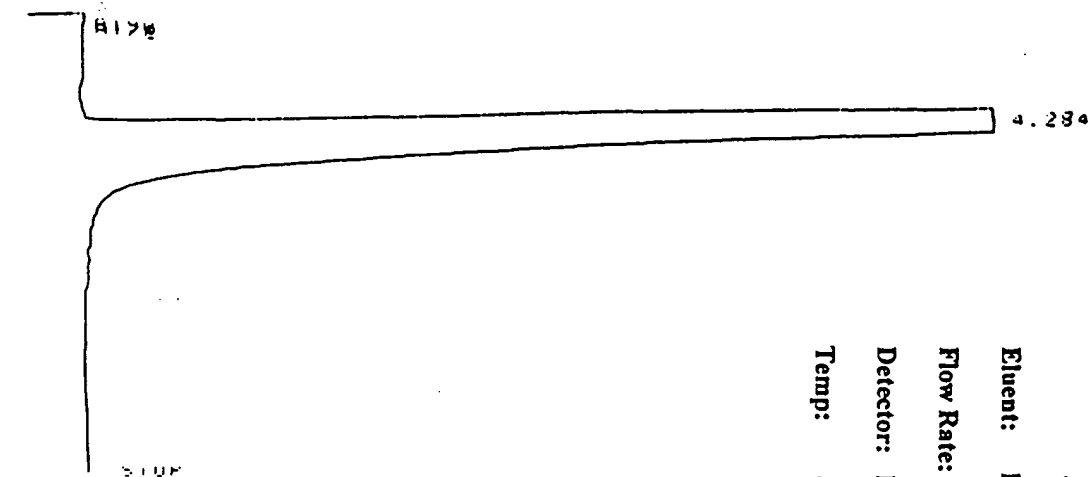
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* DATE: 01-10-1982
* TIME: 12:00:00
* USER: J. L.
* FILE: (1)
* PAGE CAPACITY: 1244

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ZERU = 0. -1.474
 DIT 20 = 1
 CH1 SP = 0.5
 WK REJ = 0
 THRSN = 1
 FK WU = 0.04

* RUN * 1 JAN 28, 1999 15:31:29
STAXI



KUN# 1 JAN 28, 1999 15131129

AREA	PI	AREA TYPE	WIDTH	AREA%
4.284	108.12048	TV	.9000	100.00000

TOTAL AREA=1.0371E+08
MOL FRACTOR=1.5000E+00

HPLC analysis of ^3H -FDG (radioactive detector).

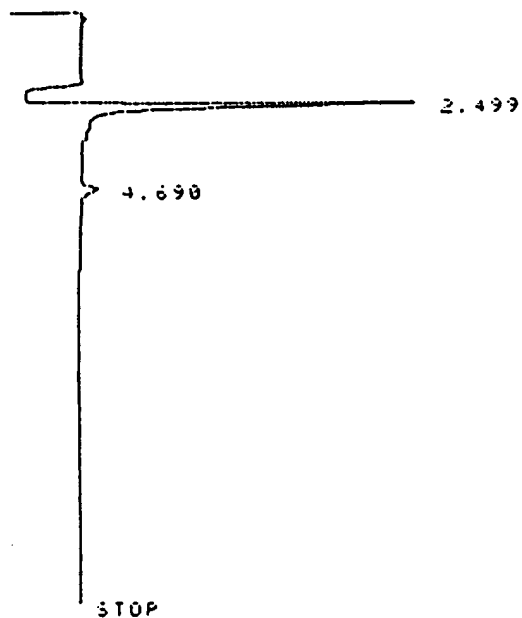
¹⁸F-FDG

• DATE 1/28/99
JAN 28, 1999 00:16:15

• CHT SP 1.5 0
• ATT 2 8 0
• THRESH 7 0
• LIST: LIST
PEAK CAPACITY: 1244

ZERO = 0. -11.179
ATT 2 = 8
CHT SP = 0.5
NR REJ = 0
THRESH = 7
PR WD = 0.04

• RUN # 1 JAN 28, 1999 00:37:02
START



RUN# 1 JAN 28, 1999 00:37:02

Column: Bio-Rad Carbohydrate,
Aminex HPX-87C, 250x4mm

Eluent: H₂O

Flow Rate: 0.4ml/min

Detector: UV, 254nm

Temp: 85.0°C

FIG. 45

00500152 - 0050100
HPLC analysis of ¹⁸F-FDG (UV 254 nm).

% of Drug Uptake in Lung Cancer Cell Line (A549)

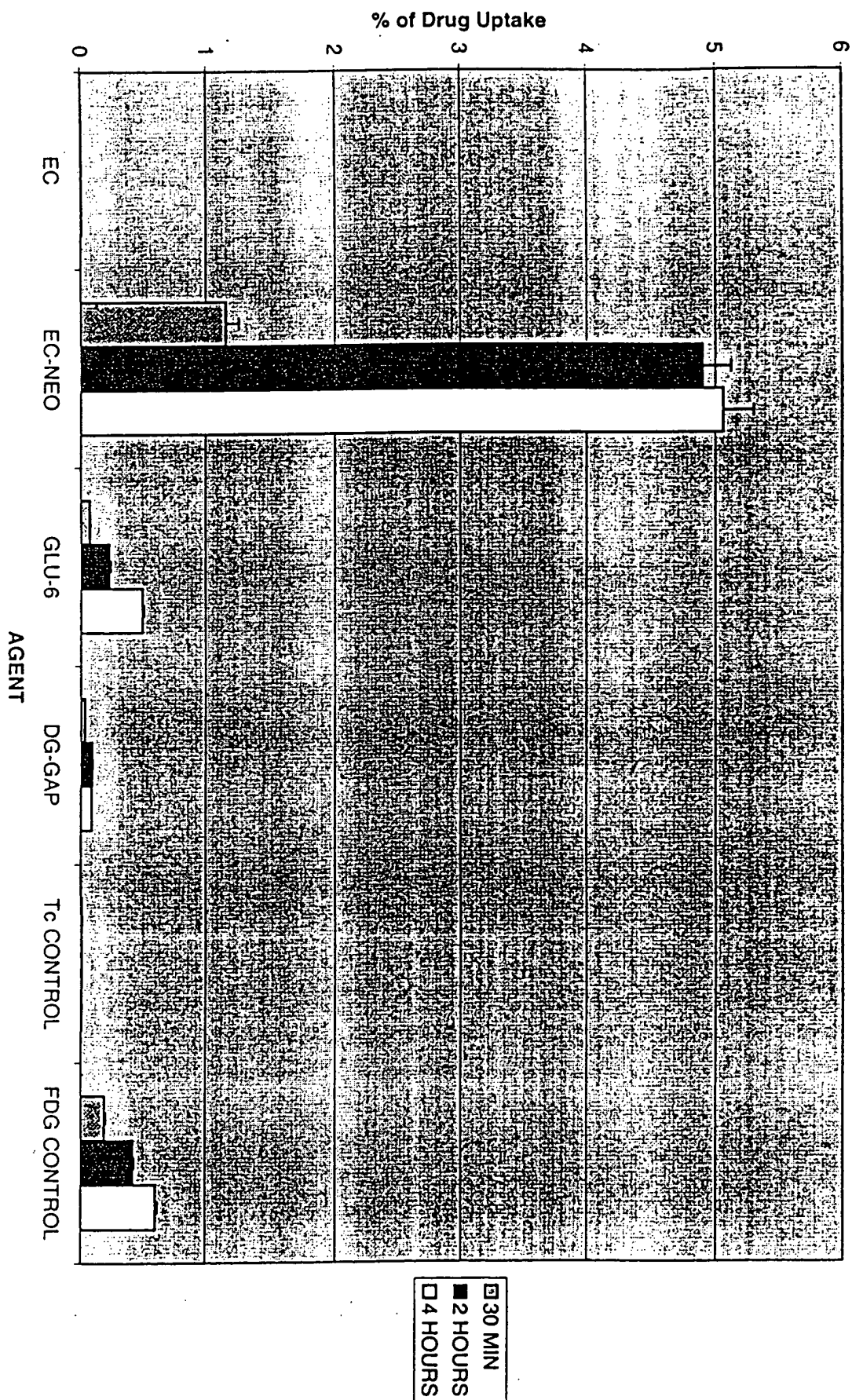


FIG. 46

In vitro cellular uptake assay of a series of ^{99m}Tc -EC drug conjugates in lung cancer cell line. ^{99m}Tc -EC- neomycin showed highest uptake in the agents tested.

% of Drug Uptake in Human Lung Cancer Cell Line (A549)

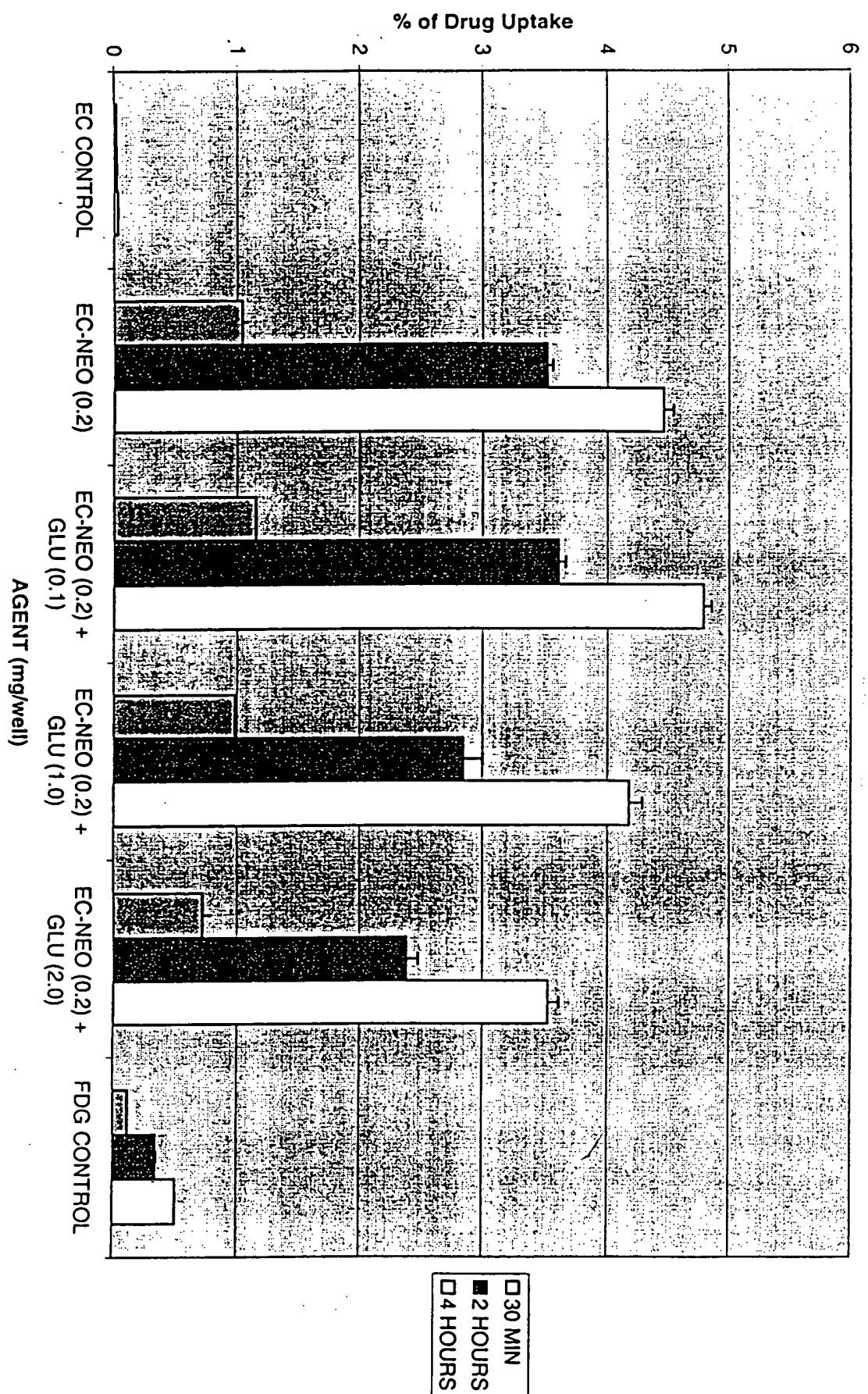


FIG. 47
Effect of glucose on cellular (A549) uptake of ^{99m}Tc -EC-neomycin and ^{18}F -FDG.

% of Drug Uptake in Human Lung Cancer Cell Line (H1299)

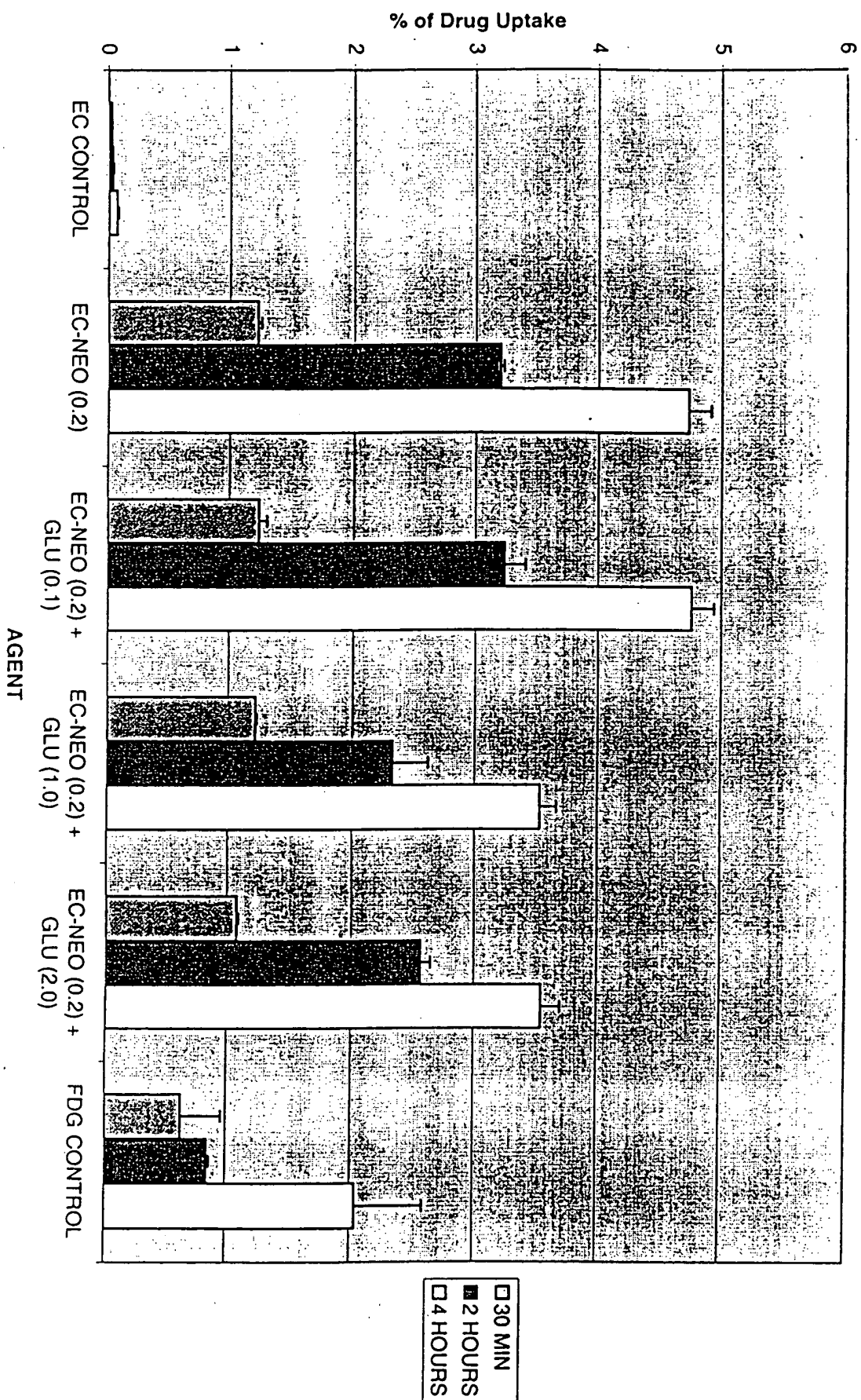
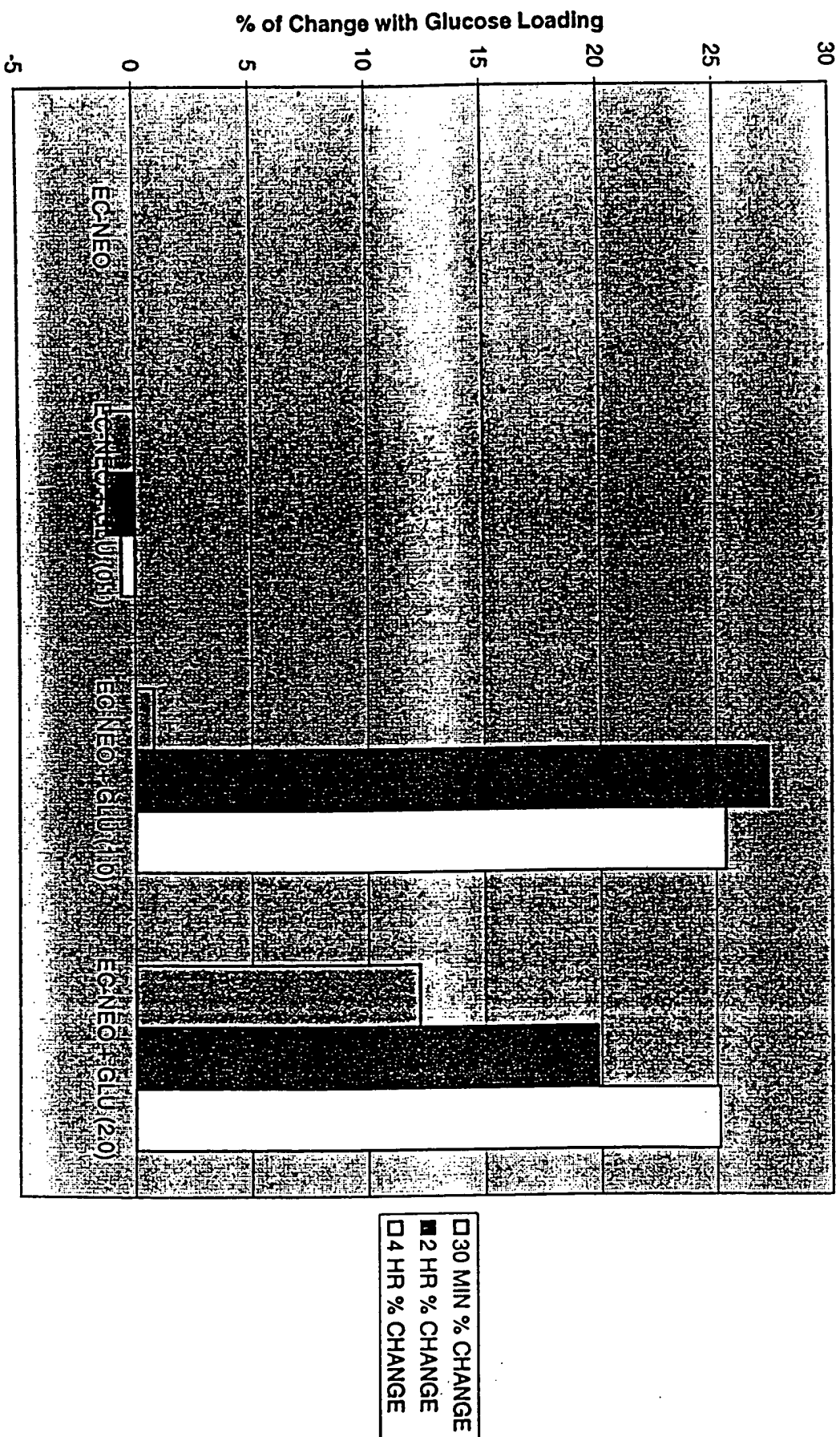


FIG. 48A

Effect of glucose on cellular (H11299) uptake of ^{99m}Tc -EC-neomycin and ^{18}F -FDG.

Effects of Glucose Loading on ^{99m}Tc-EC-Neomycin in Human Lung Cancer Cell Line (H1299)



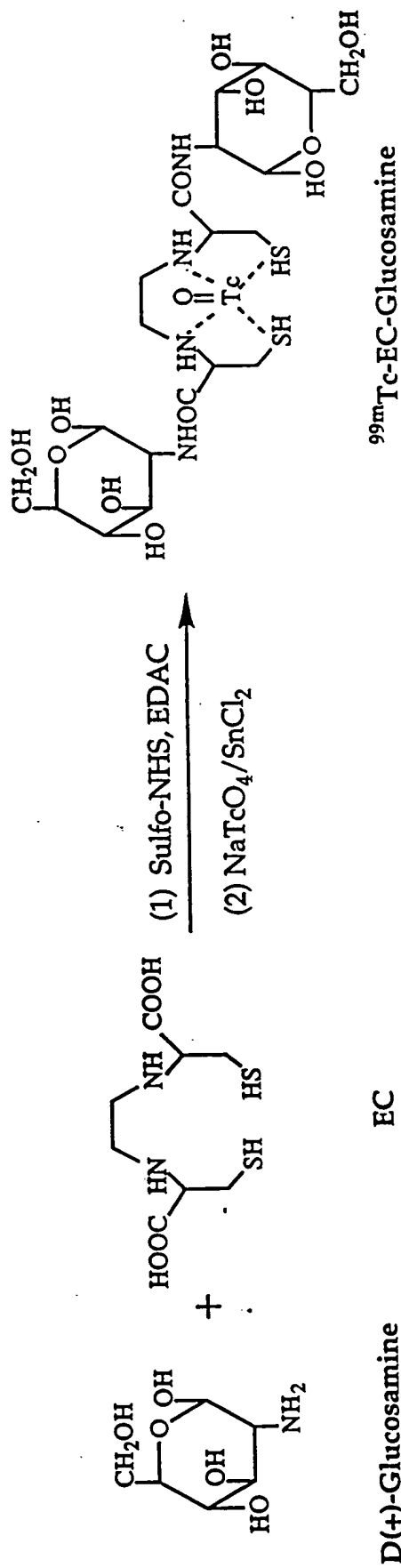
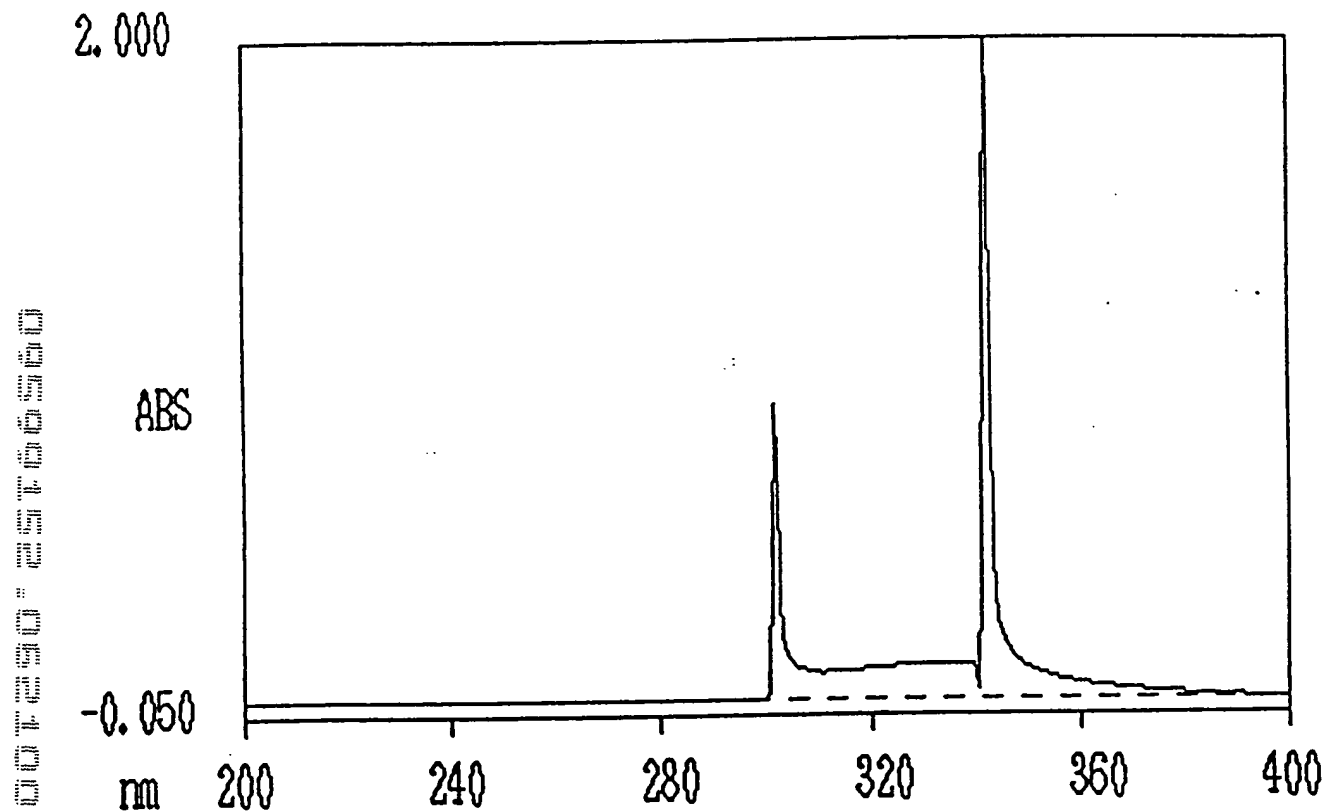


FIG. 49 Synthesis of $^{99\text{m}}\text{Tc-EC-Glucosamine}$

Hexokinase Assay of Glucose

WAVELENGTH SCAN/0

03/01/00 14:41



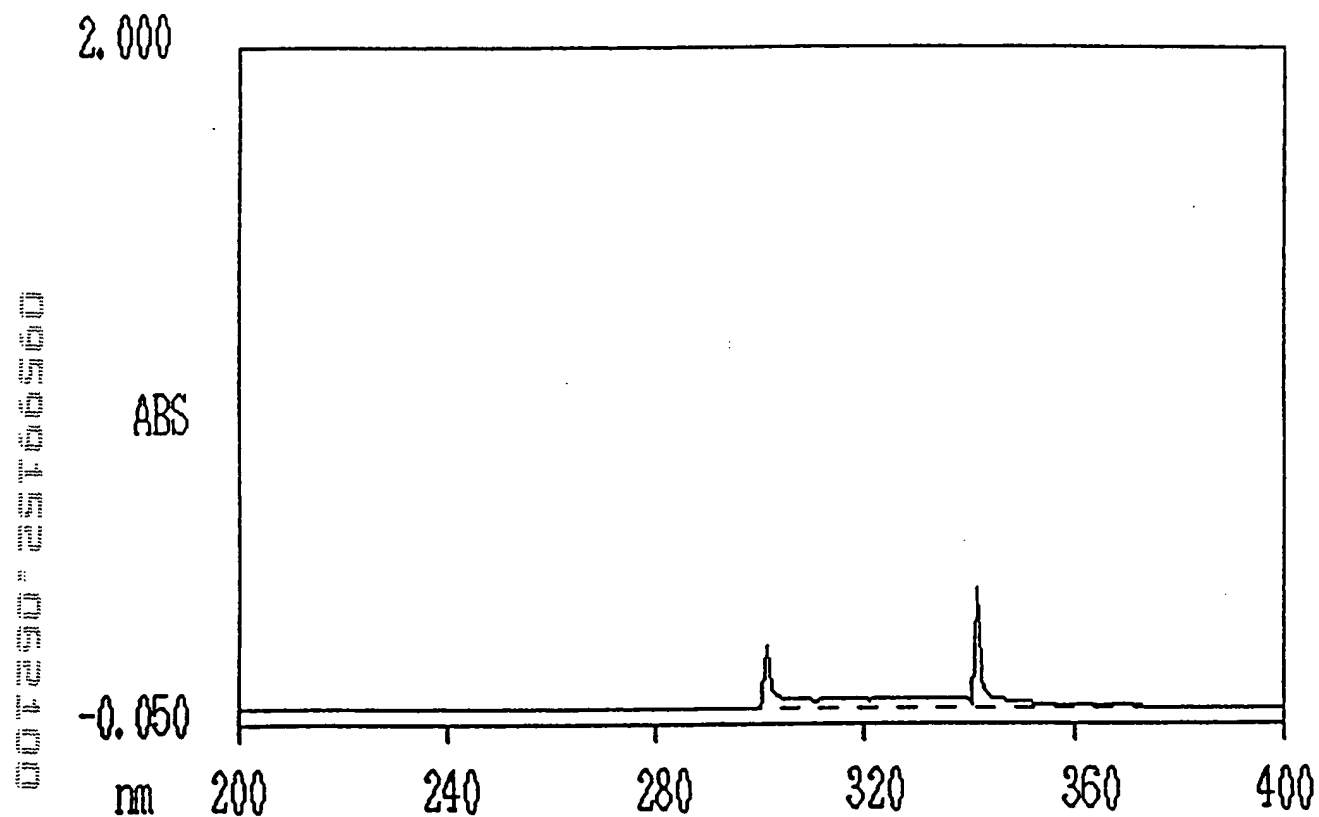
301.5 nm	0.889 ABS
342.0 nm	2.044 ABS

FIG. 50

Hexokinase Assay of Glucosamine

WAVELENGTH SCAN/0

03/01/00 14:50



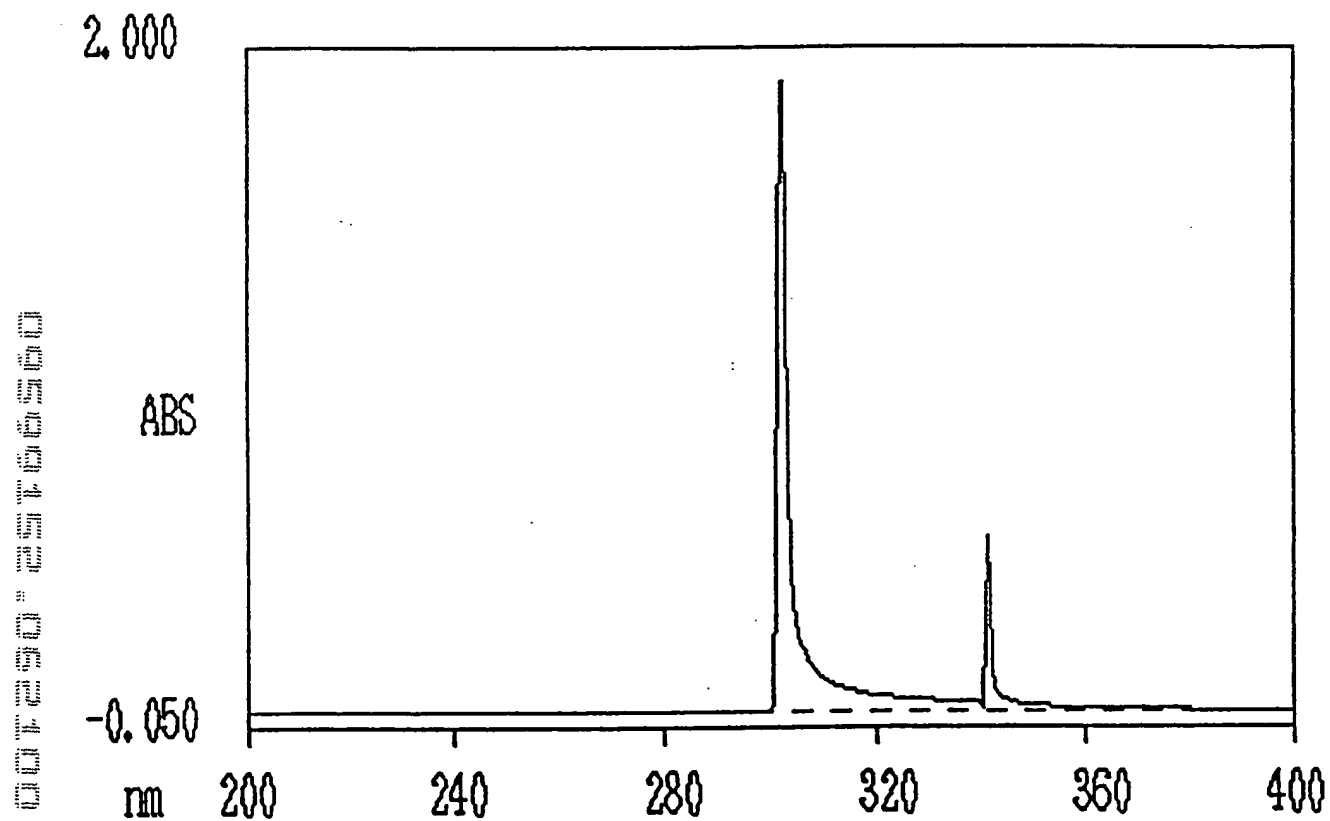
301.5 nm 0.193 ABS
341.5 nm 0.360 ABS

FIG. 51

Hexokinase Assay of EC-Glucosamine

WAVELENGTH SCAN/0

03/01/00 14:45



302.5 nm 1.897 ABS
341.5 nm 0.523 ABS

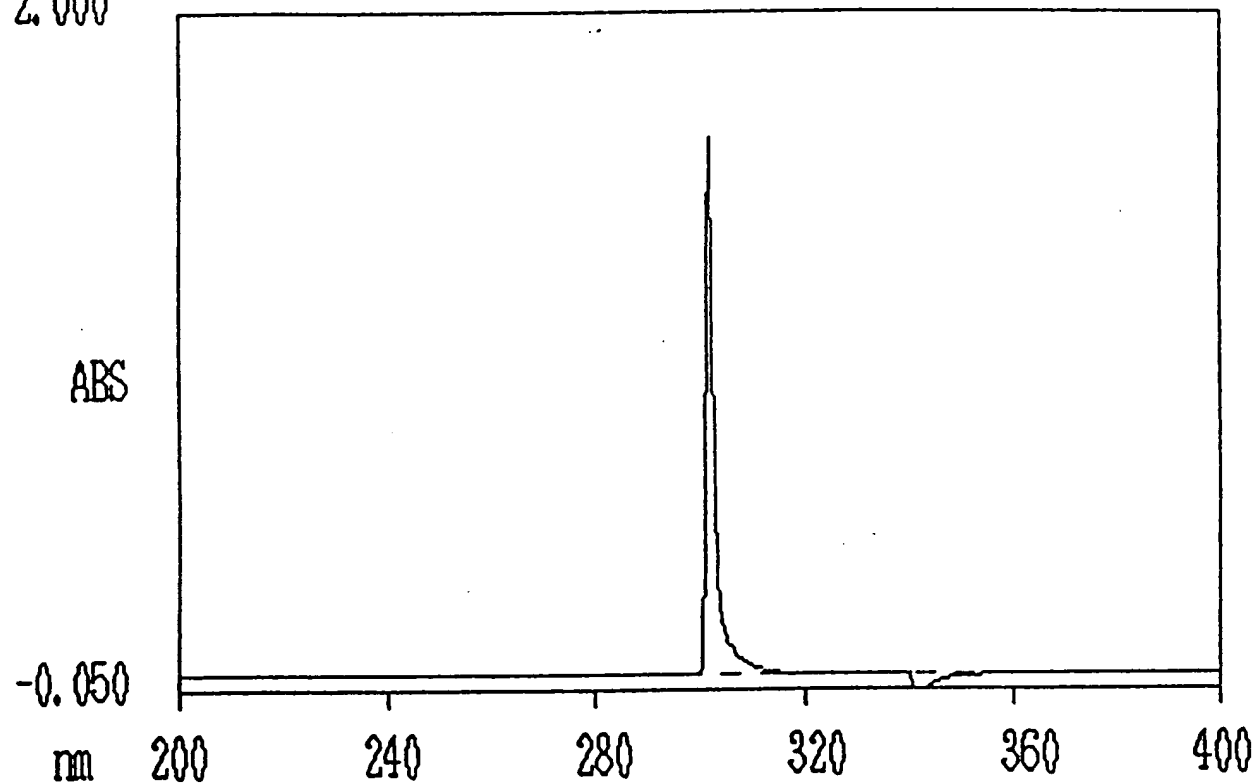
FIG. 52

Hexokinase Assay of EC-GAP-Glucosamine

WAVELENGTH SCAN/0

03/01/00 15:37

2.000



302.0 nm 1.620 ABS

FIG. 53

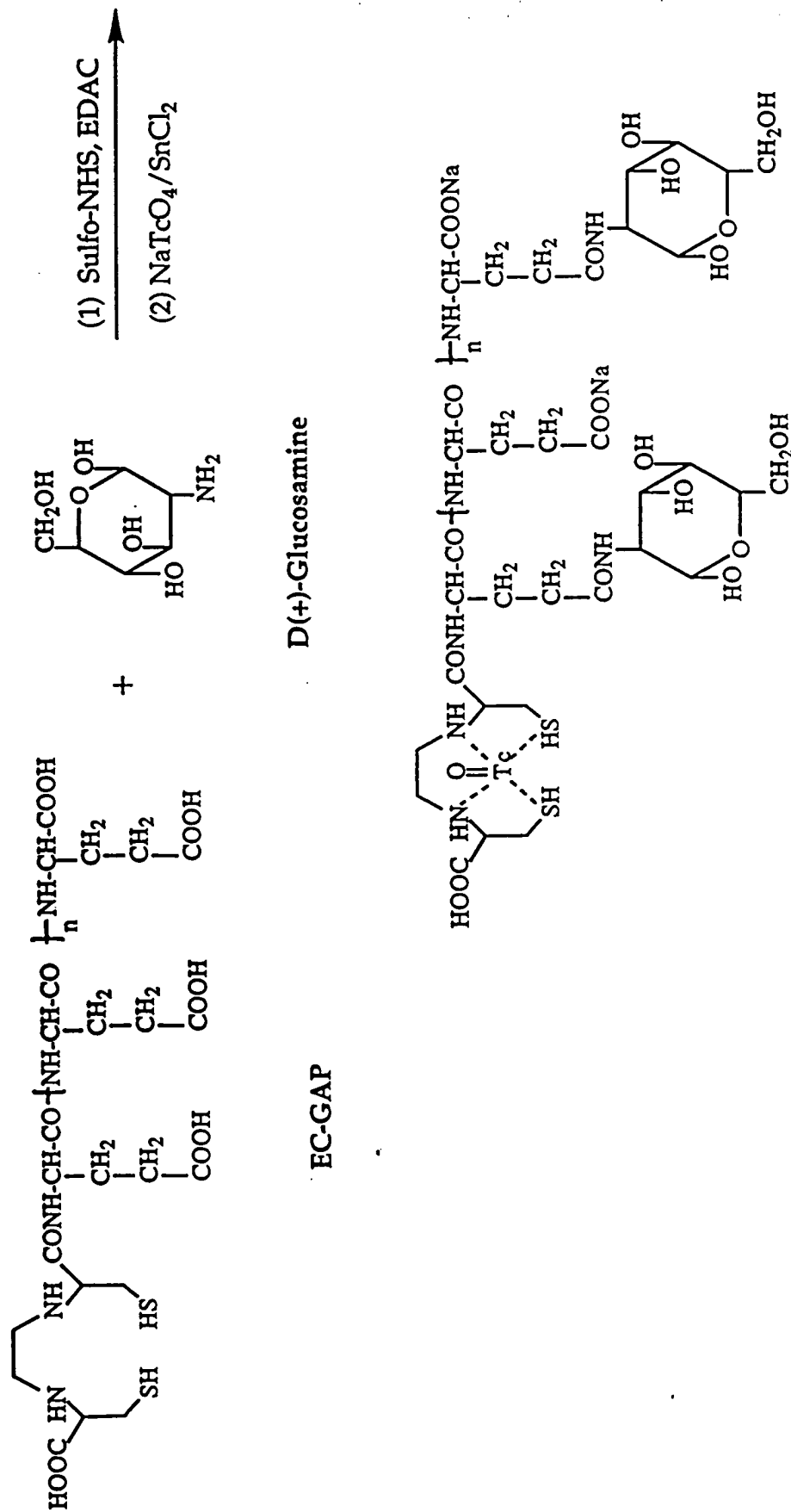
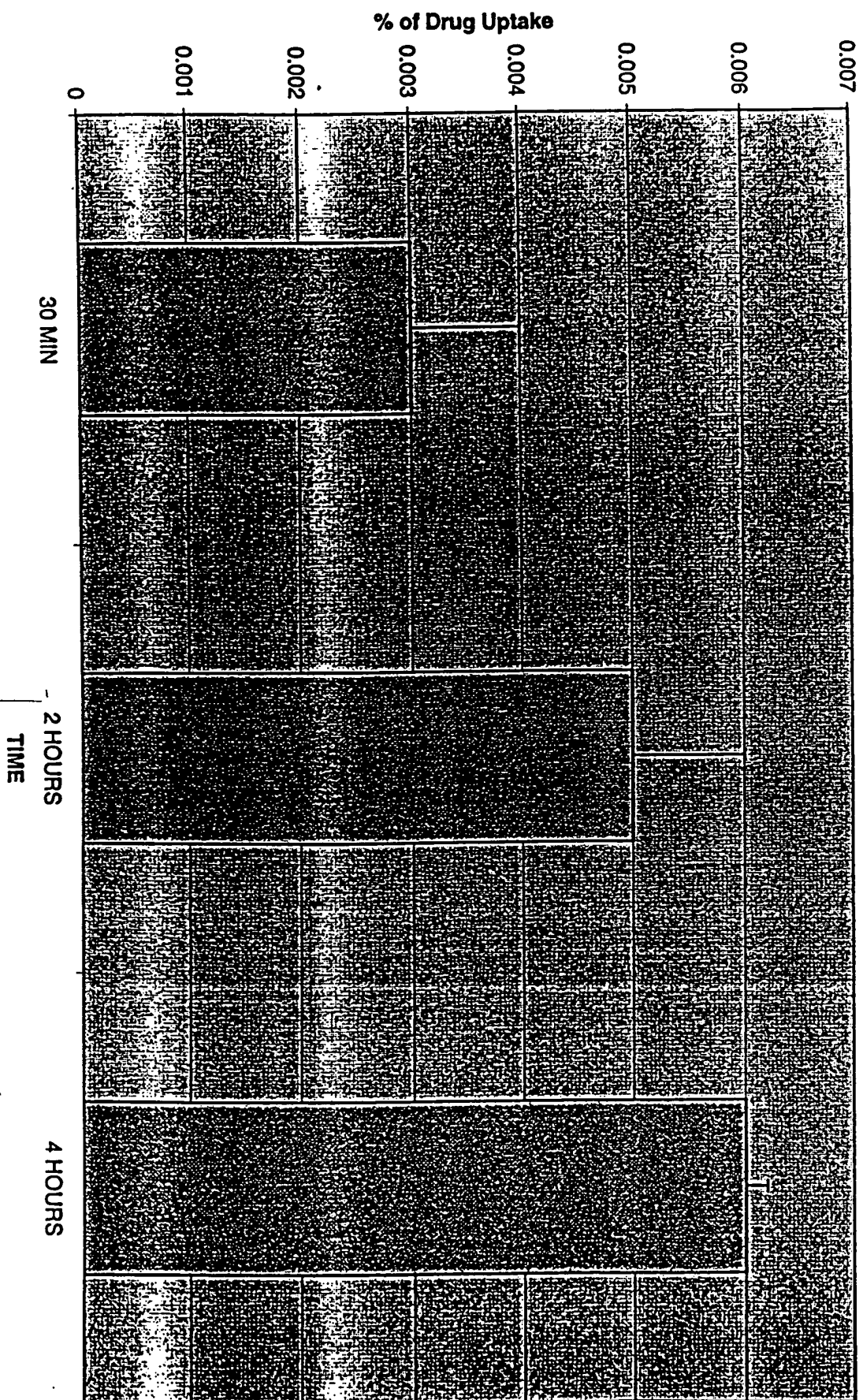


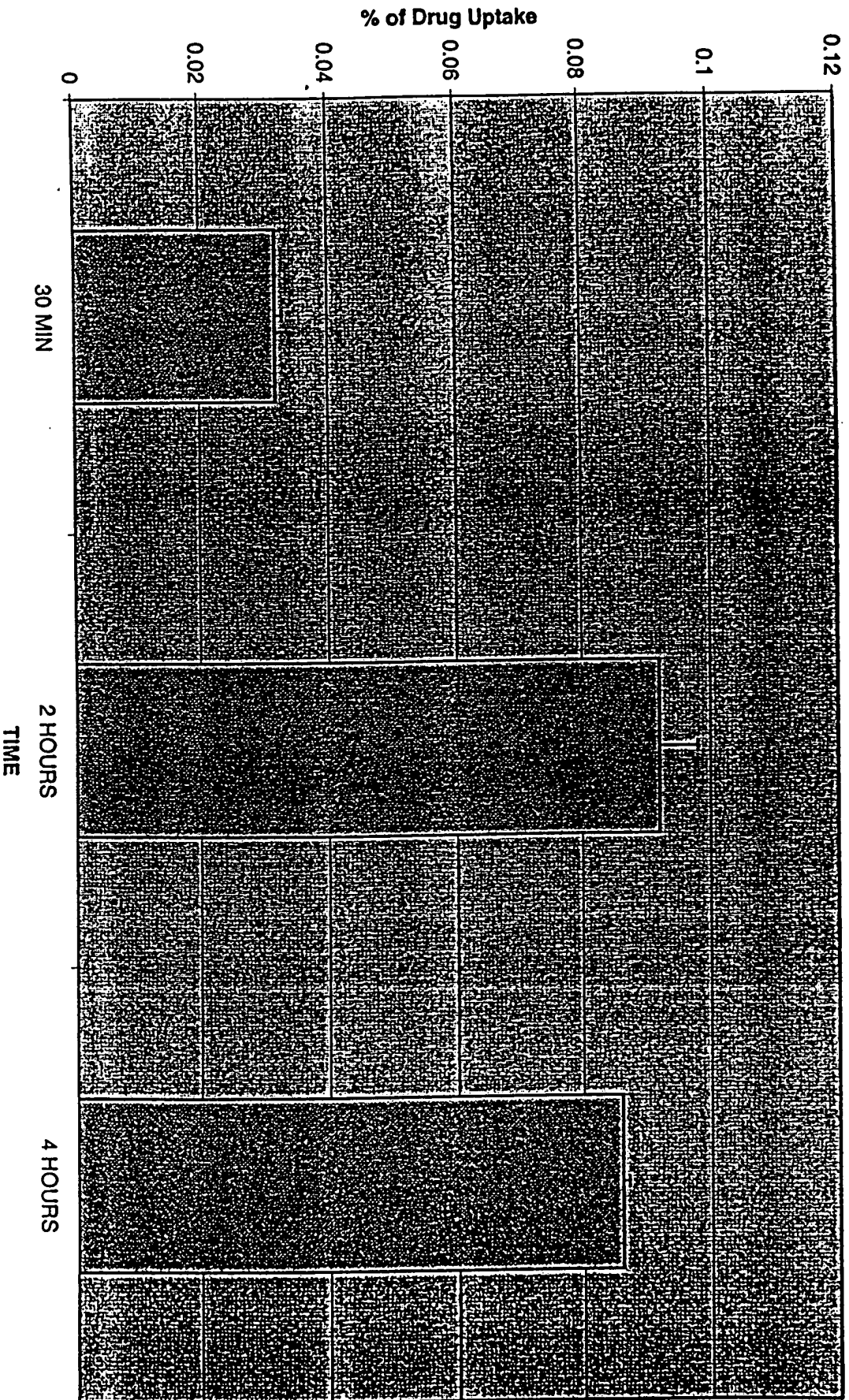
FIG. 54 Synthesis of $^{99\text{m}}\text{Tc-EC-GAP-Glucosamine}$

In Vitro Cellular Uptake of ^{99m}Tc -EC in Human Lung Cancer Cell Line (A549)



005001 005002 005003 005004 FIG. 55A

In Vitro Cellular Uptake of ^{89m}Tc -EC-DG-GAP in Human Lung Cancer Cell Line (A549)



In Vitro Cellular Uptake of ^{18}F FDG in Human Lung Cancer Cell Line (A549)

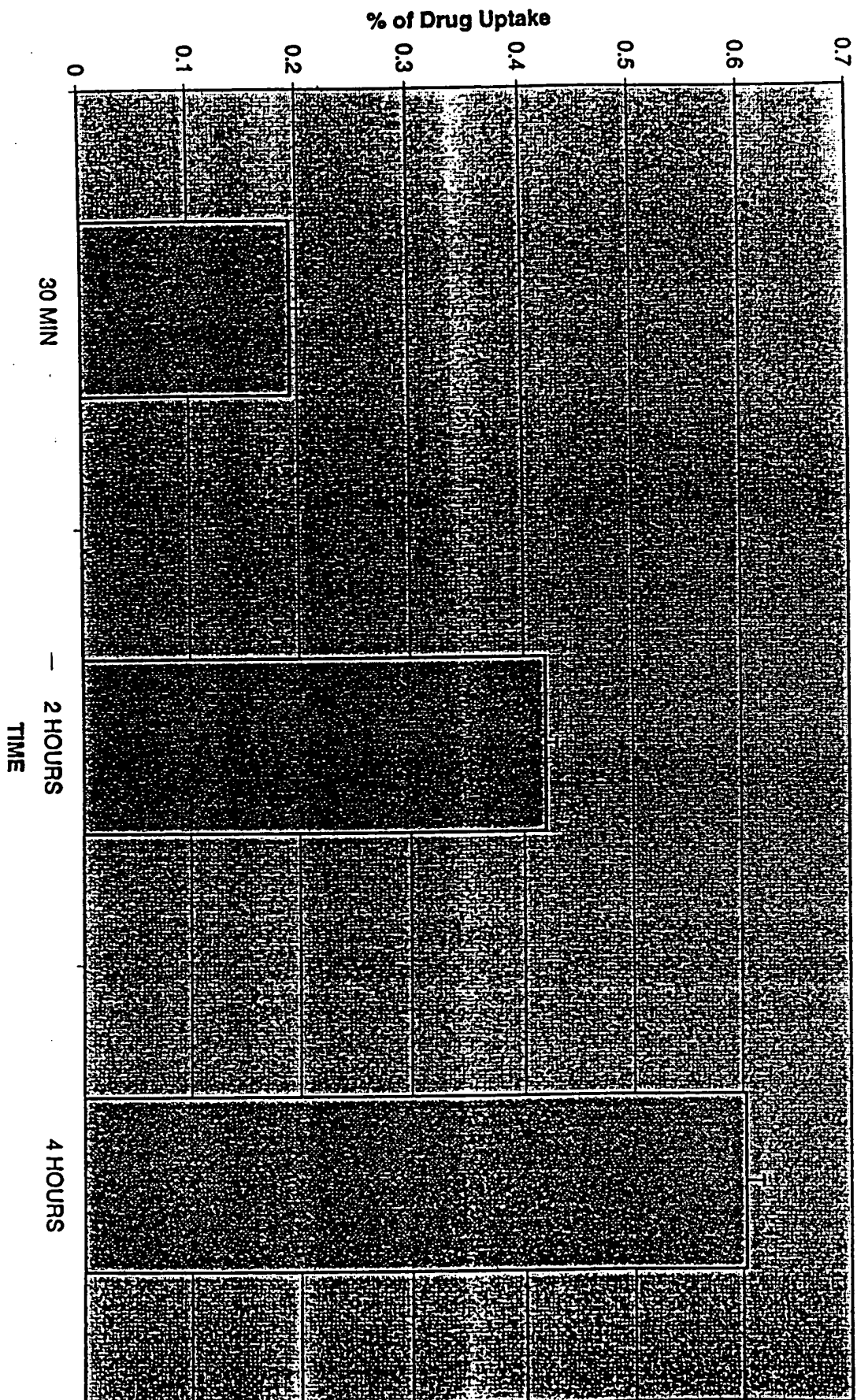
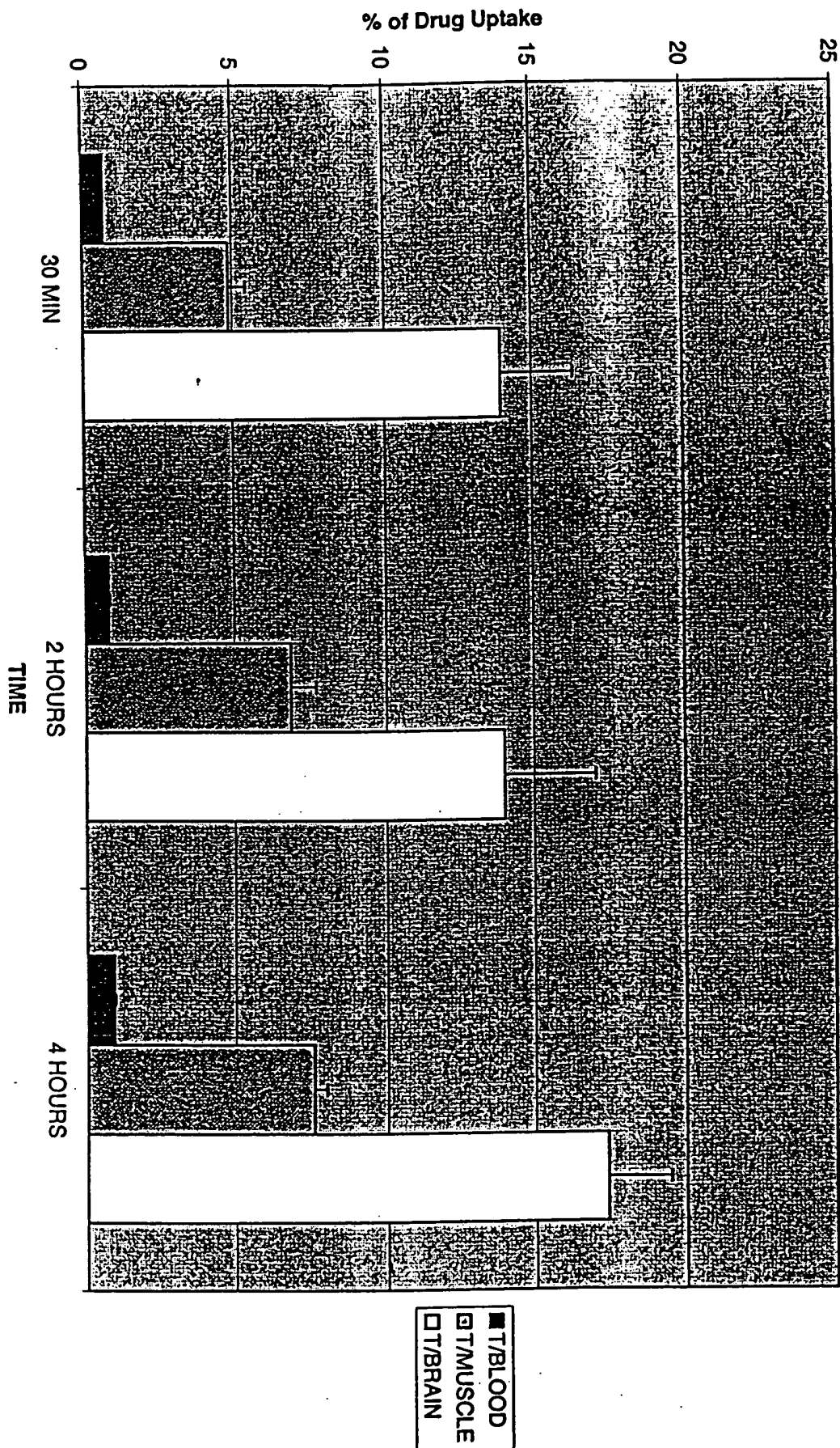


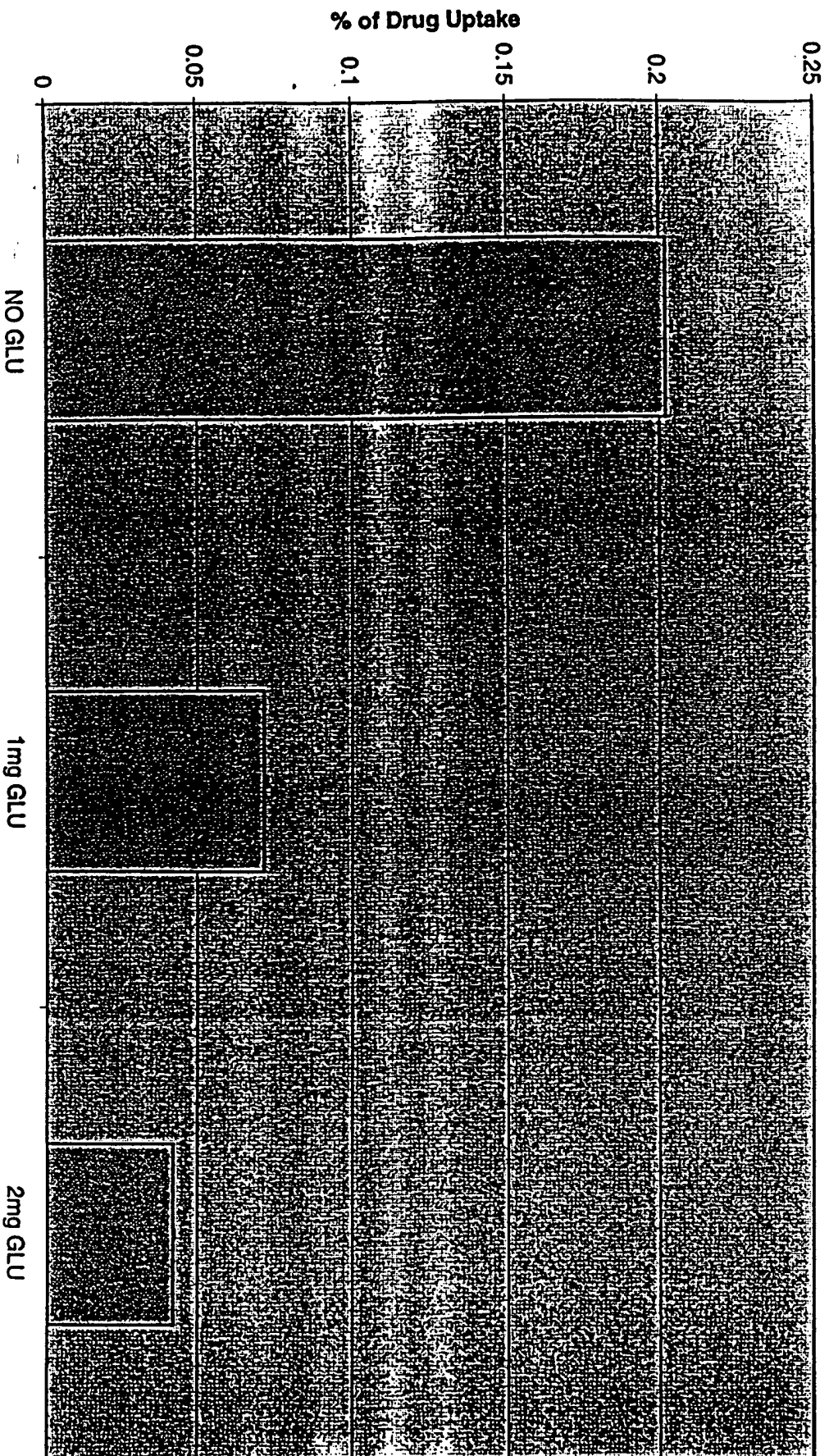
FIG. 55C

Tumor-to-tissue count density ratios of ^{86}mTc -EC-GAP in breast tumor-bearing rats
(n=3/interval; 10 $\mu\text{Ci}/\text{rat}$, IV)



0959452-062400
FIG. 56

In Vitro Cellular Uptake of ^{18}F FDG with Glucose Loading at 2 Hours Post-Injection in Breast
Cancer Cell Line (13762)



0959452-062100 FIG. 57

% Uptake of ^{99m}Tc-EC-Neomycin in Breast Tumor-Bearing Rats

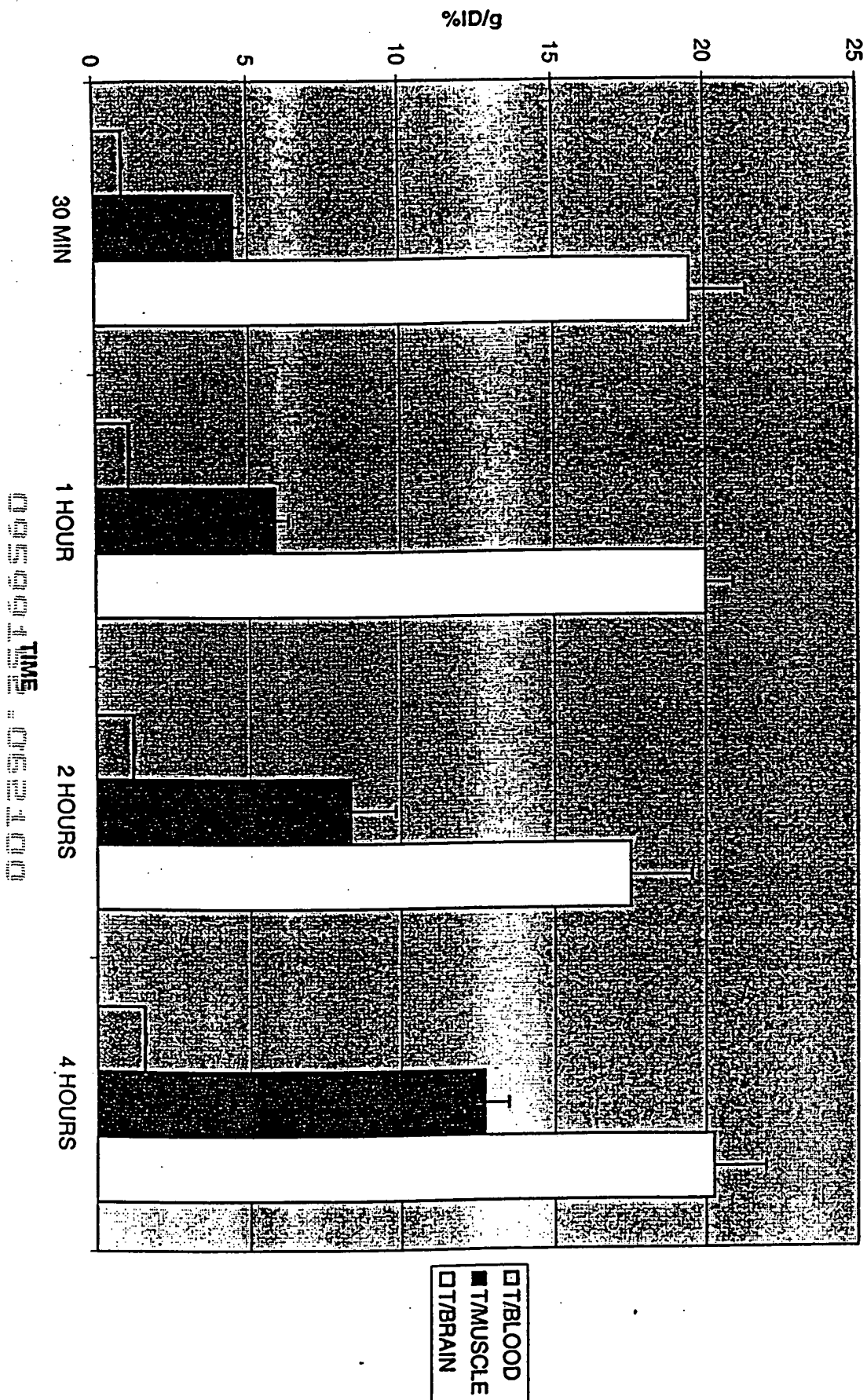


FIG. 58

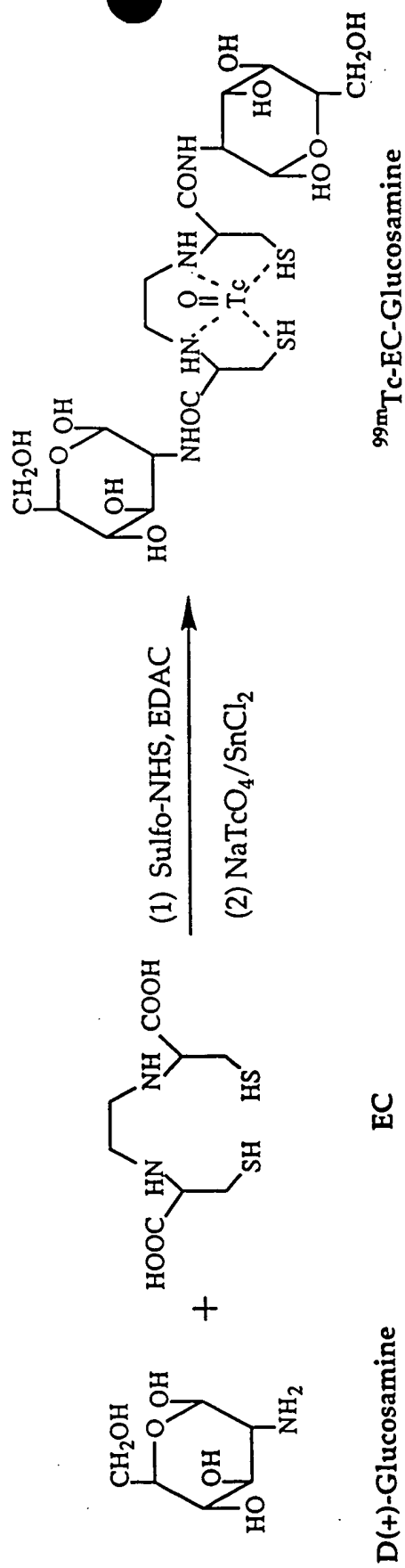


FIG. 59 Synthetic scheme of ^{99m}Tc-EC-deoxyglucose.

EC-2000-5000 DHB

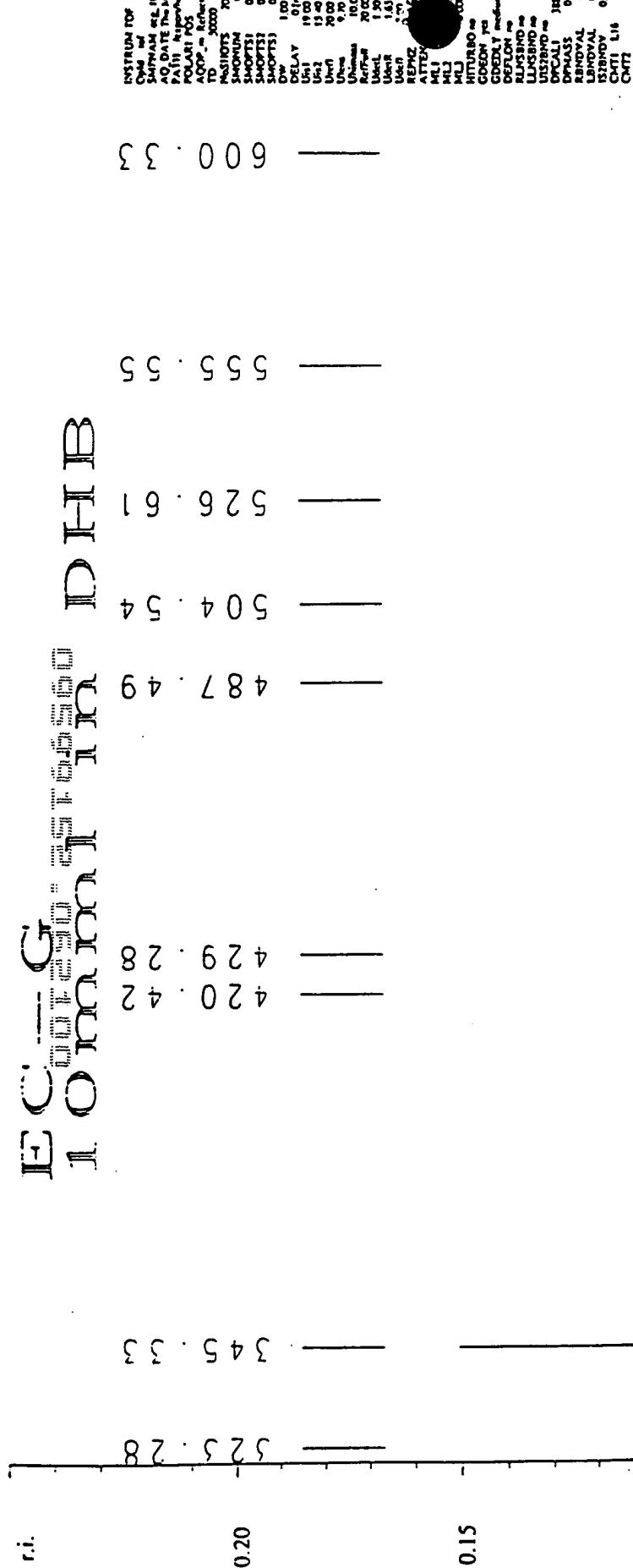


FIG. 60 Mass spectrometry of EC-deoxyglucose.

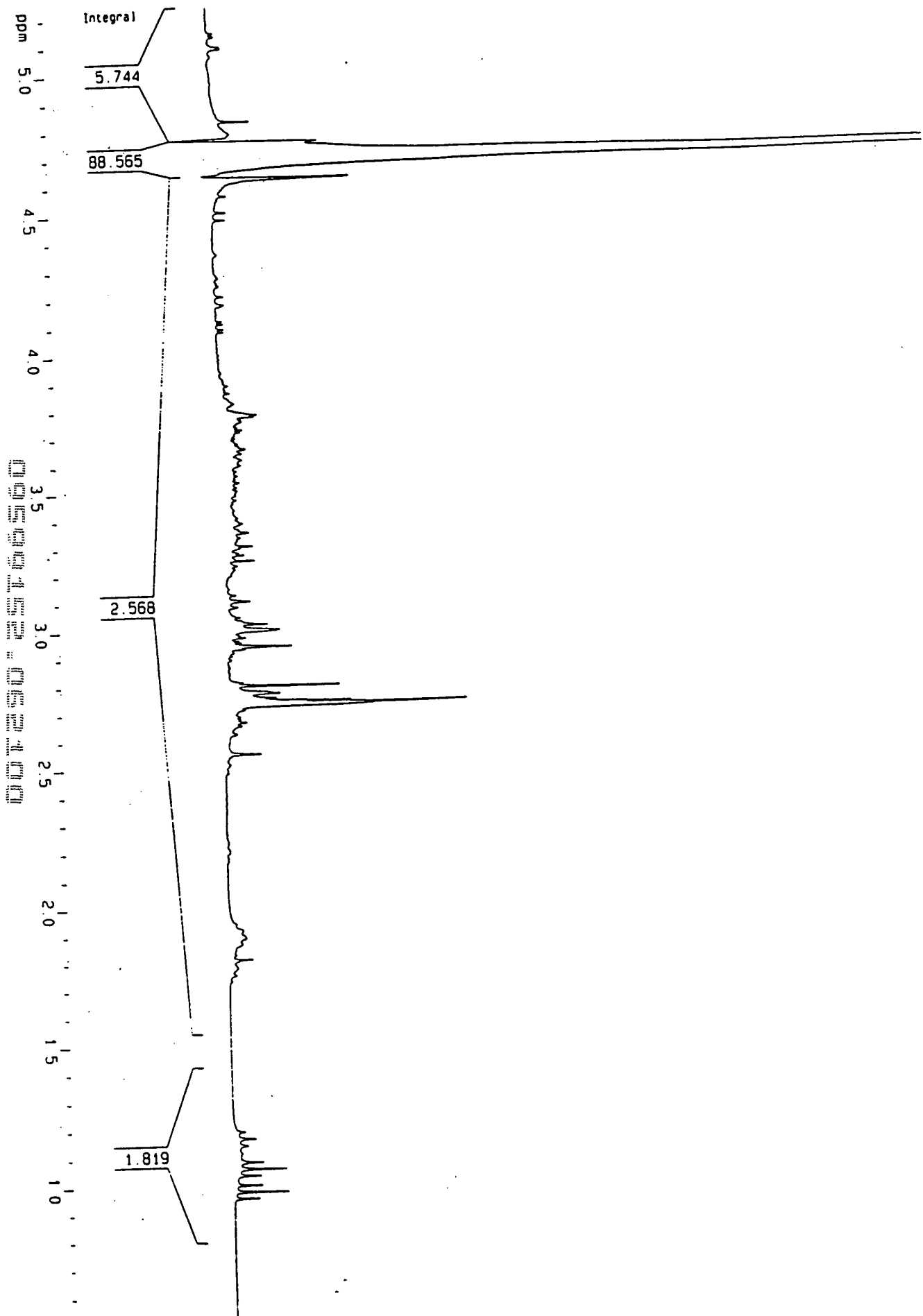


FIG. 61

 ^1H -NMR of EC-deoxyglucose (EC-DG).

Glucosamine

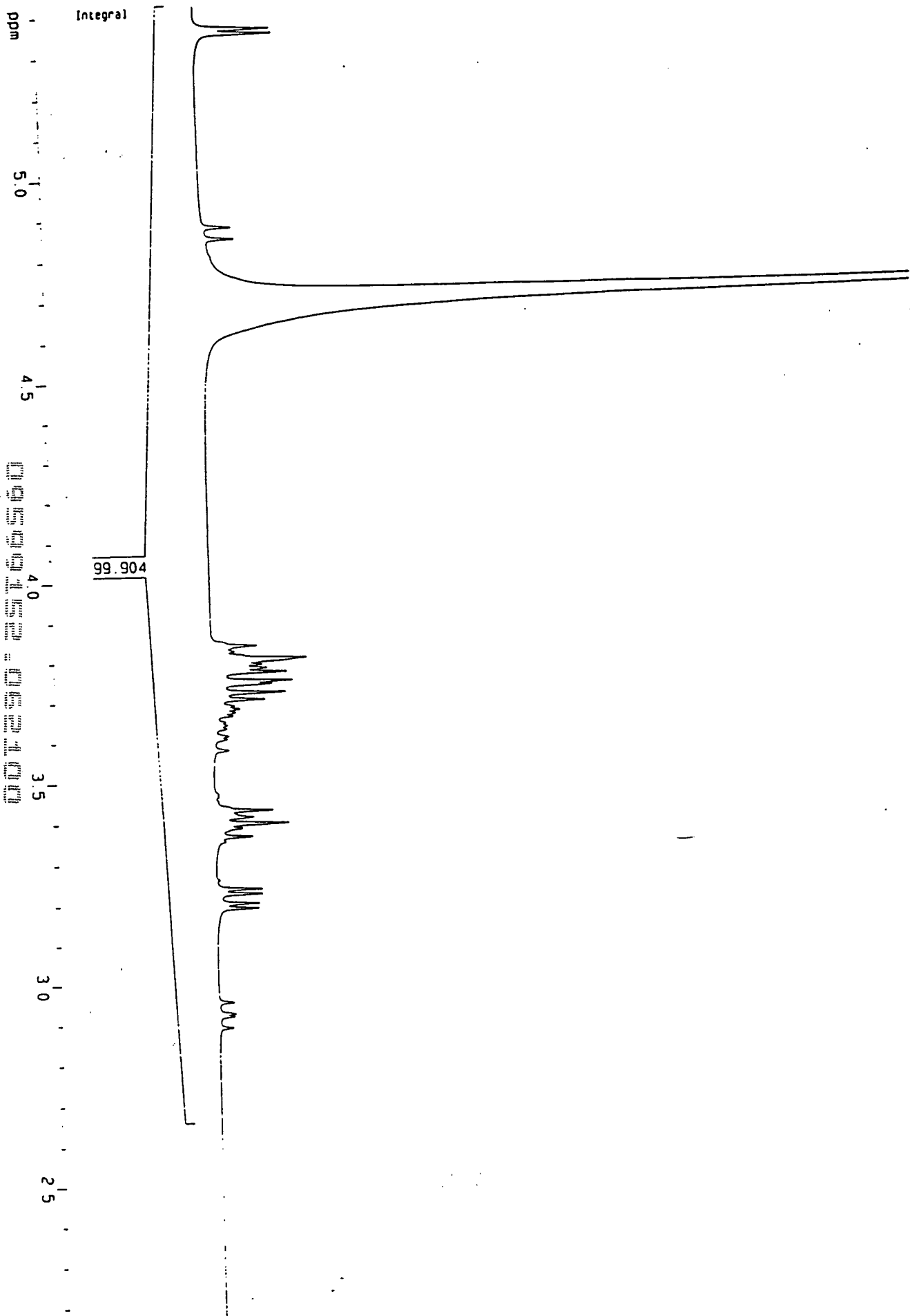


FIG. 62

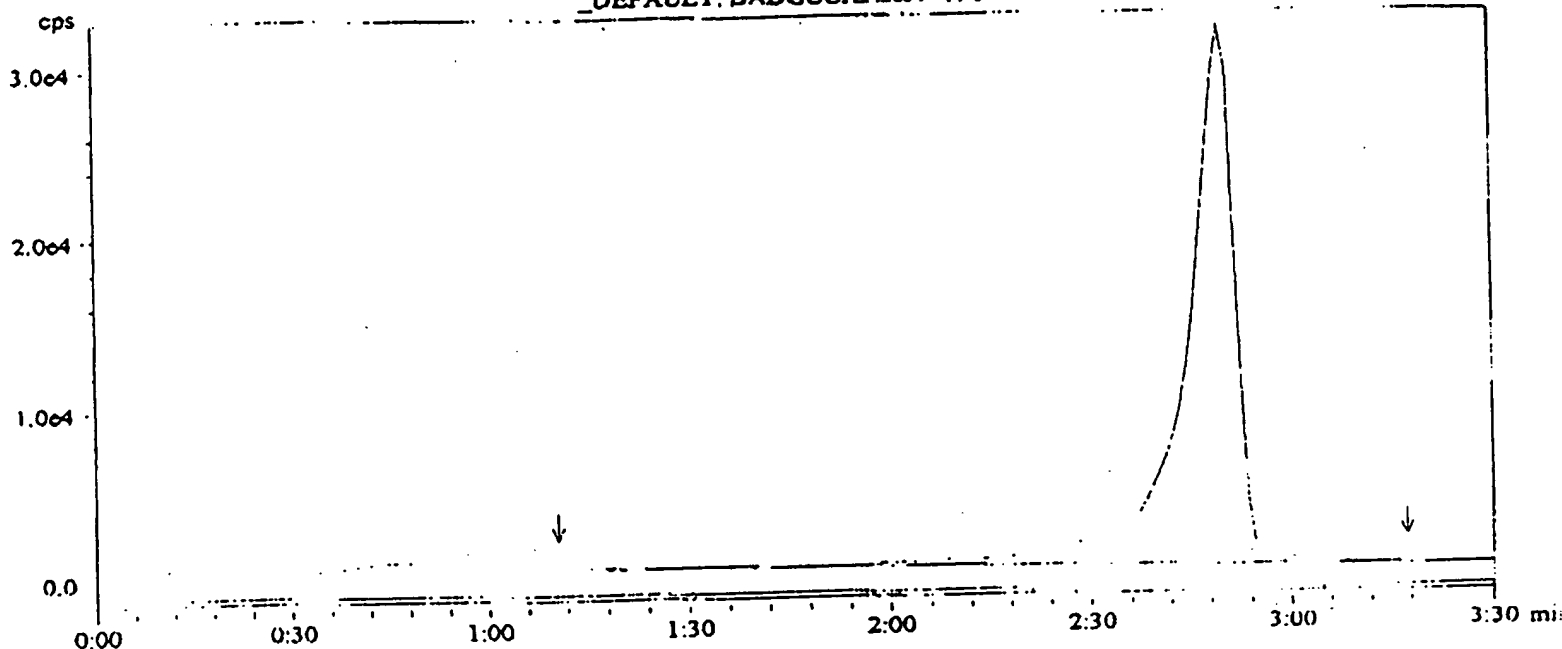
^1H -NMR of glucosamine.

04-03 18:55 MON FROM: WON KWANG H

Method: DEFAULT File: BABGCCAF.R01 data User: EC-Glucosami

(99m Tc 2 DG TLC)

DEFAULT: BABGCCAF.R01 - H-3



neutrons: BABGCCAF.R01

Channel: H-3		Detector:					
Name	Start - End	RT	Height (cps)	Area (Counts)	%Total (%)	%ROI (%)	
Bkg 1	0: 00- 2: 19	1: 09	539.7				
Rgn 1	2: 19- 3: 02	2: 47	31606.2	263570.8	97.99	100.00	
Bkg 2	3: 02- 3: 27	3: 14	250.1				
1 Peak				263570.8	97.99	100.00	
Total Area	=	268986.1 Counts					
Bkg Area	=	89999.9 Counts					
Unallocated	=	5415.3 Counts (2.01%)					

Trace Parameters: BABGCCAF.R01 H-3

Trace Display Smoothing: 0.0 s
 Trace Display Shift: 0.0 s
 Trace Display Factor: 1.000
 Channel Shift: 0.0 s
 Channel Factor: 1.000

Regions were added manually.

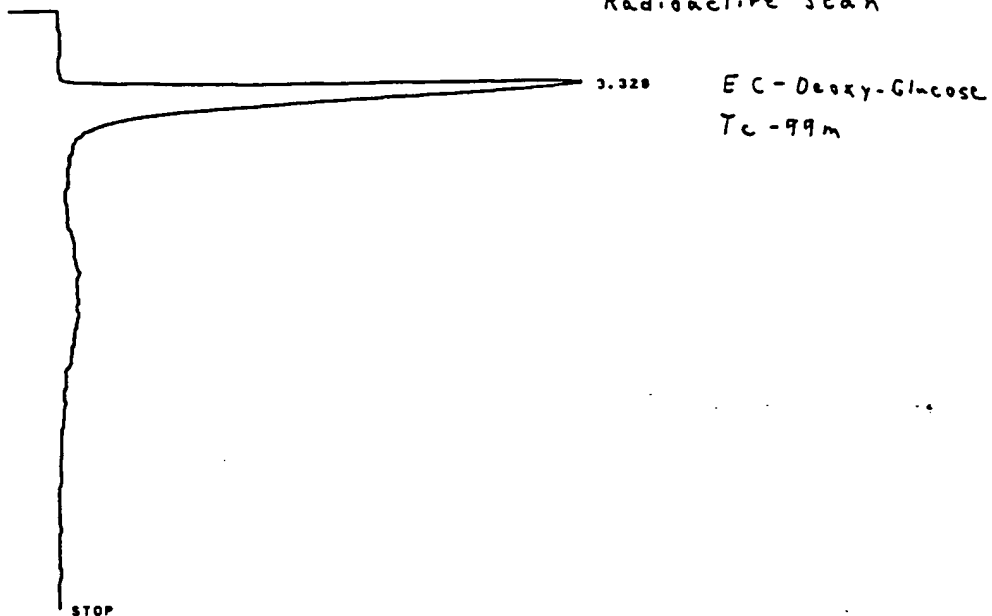
FIG. 63

Radio-TLC analysis of ^{99m}Tc-EC-DG.

^{99m}Tc-EC-deoxyglucose

Bio Rad Aminex HPX-87C
col
250 x 4 mm
.4 ml/min. H₂O at
25°C
Radioactive Scan

• ATT 2-7-8
• RUN 5 MAR 30, 1999 14143128
START: not ready



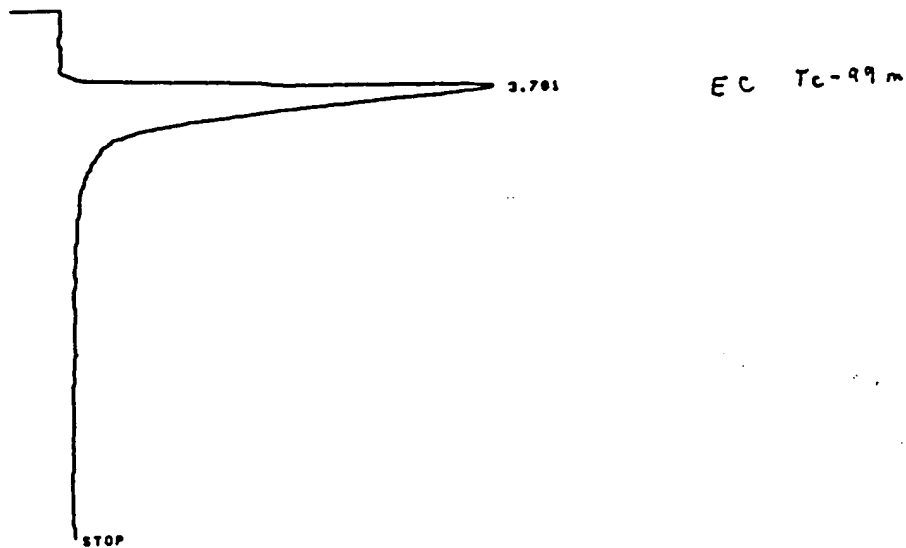
RUN 5 MAR 30, 1999 14143128

RT	AREA	TYPE	WIDTH	AREA%
3.328	33350000	BV	.813	100.00000

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NUL FACTOR=1.0000E+00

Radioactive Scan

• RUN 6 MAR 30, 1999 15109139
START



RUN 6 MAR 30, 1999 15109139

RT	AREA	TYPE	WIDTH	AREA%
3.781	16673104	BV	.510	100.00000

TOTAL AREA=1.6671E+07

^{99m}Tc-EC

FIG. 64

HPLC analysis of ^{99m}Tc-EC-deoxyglucose and ^{99m}Tc-EC-

(radioactive detector). 06:20:00

* ATT 2^ BREAK

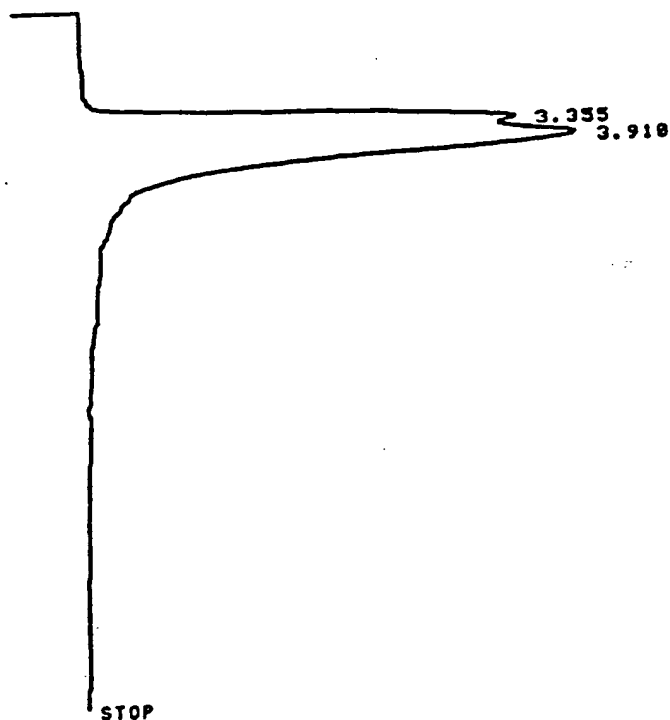
BREAK

* LIST: ATT 2^ = 7

* ATT 2^ 8 8

* RUN 6 7 MAR 30, 1999 15132137

START



Radioactive Scan

Mixed Tc-99m
EC-Deoxy-Glucose
EC

^{99m}Tc -EC-deoxyglucose + ^{99m}Tc -EC
(mixed)

RUN# 7 MAR 30, 1999 15132137

AREA#	RT	AREA	TYPE	WIDTH	AREA#
	3.355	22173760	BV	.448	58.46186
	3.918	21767872	VV	.387	49.53814

TOTAL AREA=4.3942E+07
MUL FACTOR=1.0000E+00

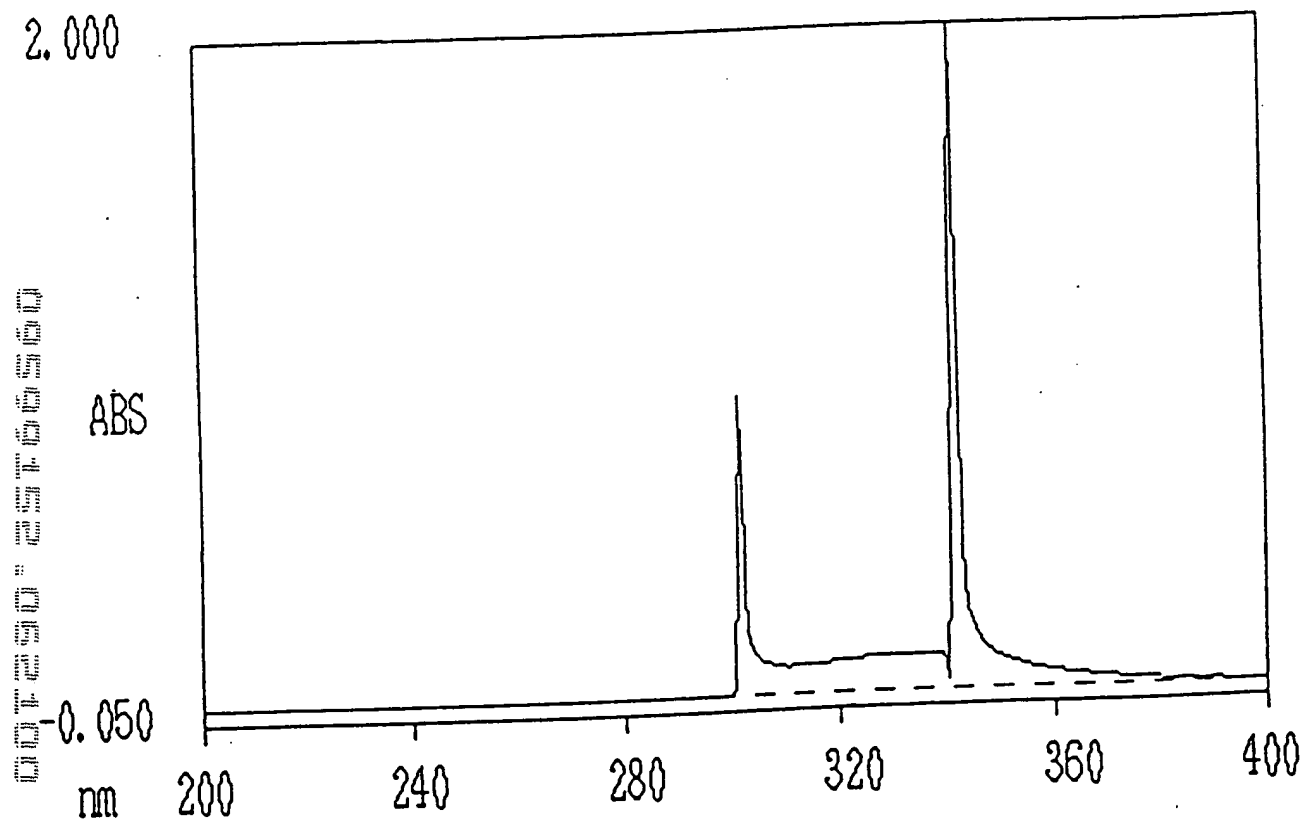
FIG. 65

HPLC analysis of ^{99m}Tc -EC-deoxyglucose and ^{99m}Tc -EC
(radioactive detector, mixed).

Hexokinase Assay of Glucose

WAVELENGTH SCAN/0

03/01/00 14:41



301.5 nm 0.889 ABS
342.0 nm 2.044 ABS

FIG. 66

Hexokinase assay of glucose.

Hexokinase Assay of FDG

WAVELENGTH SCAN/0

03/09/00 14:34

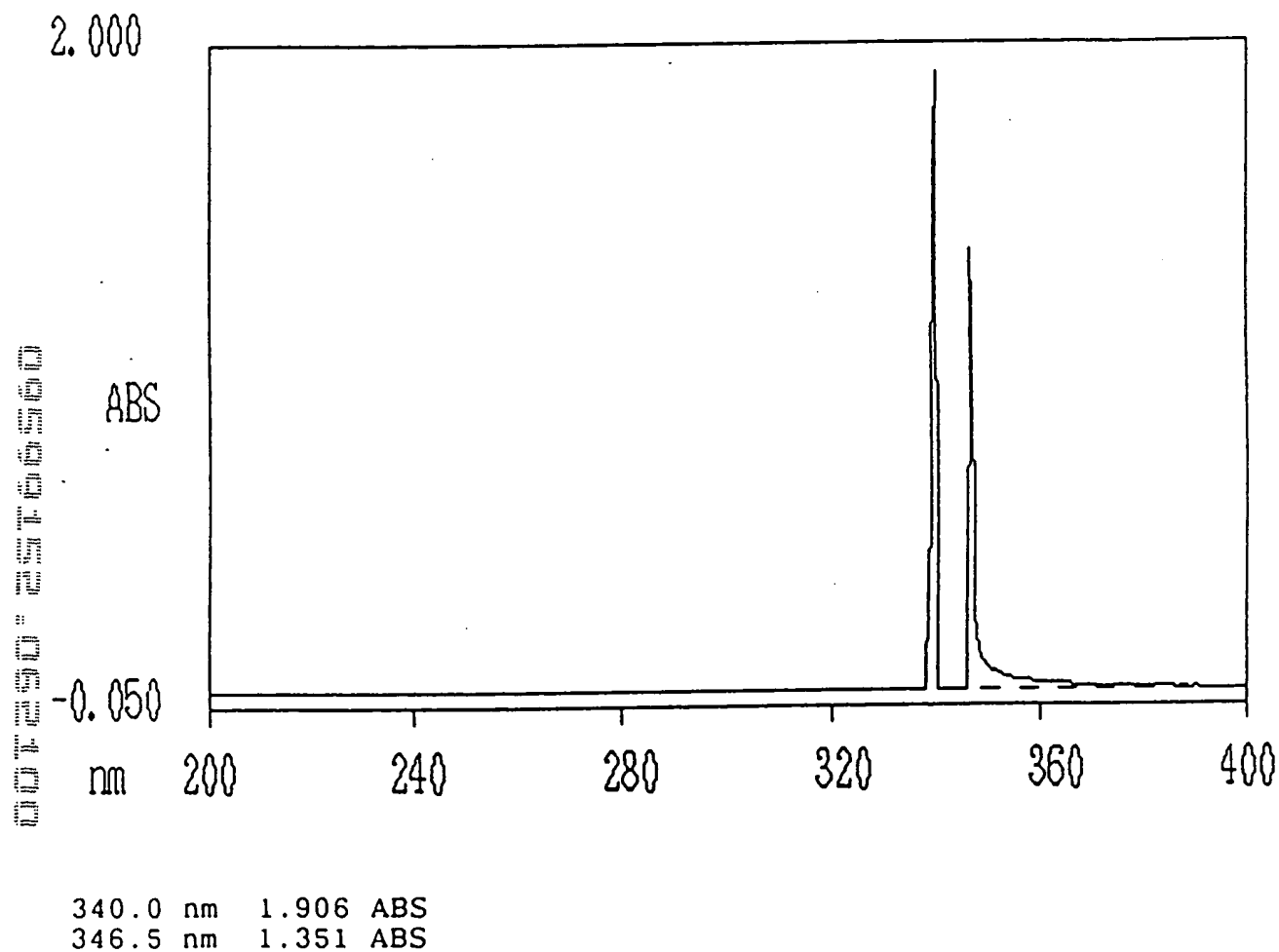


FIG. 67

Hexokinase assay of FDG.

Hexokinase Assay of EC-Glucosamine (EC-DG)

WAVELENGTH SCAN/0

03/01/00 14:45

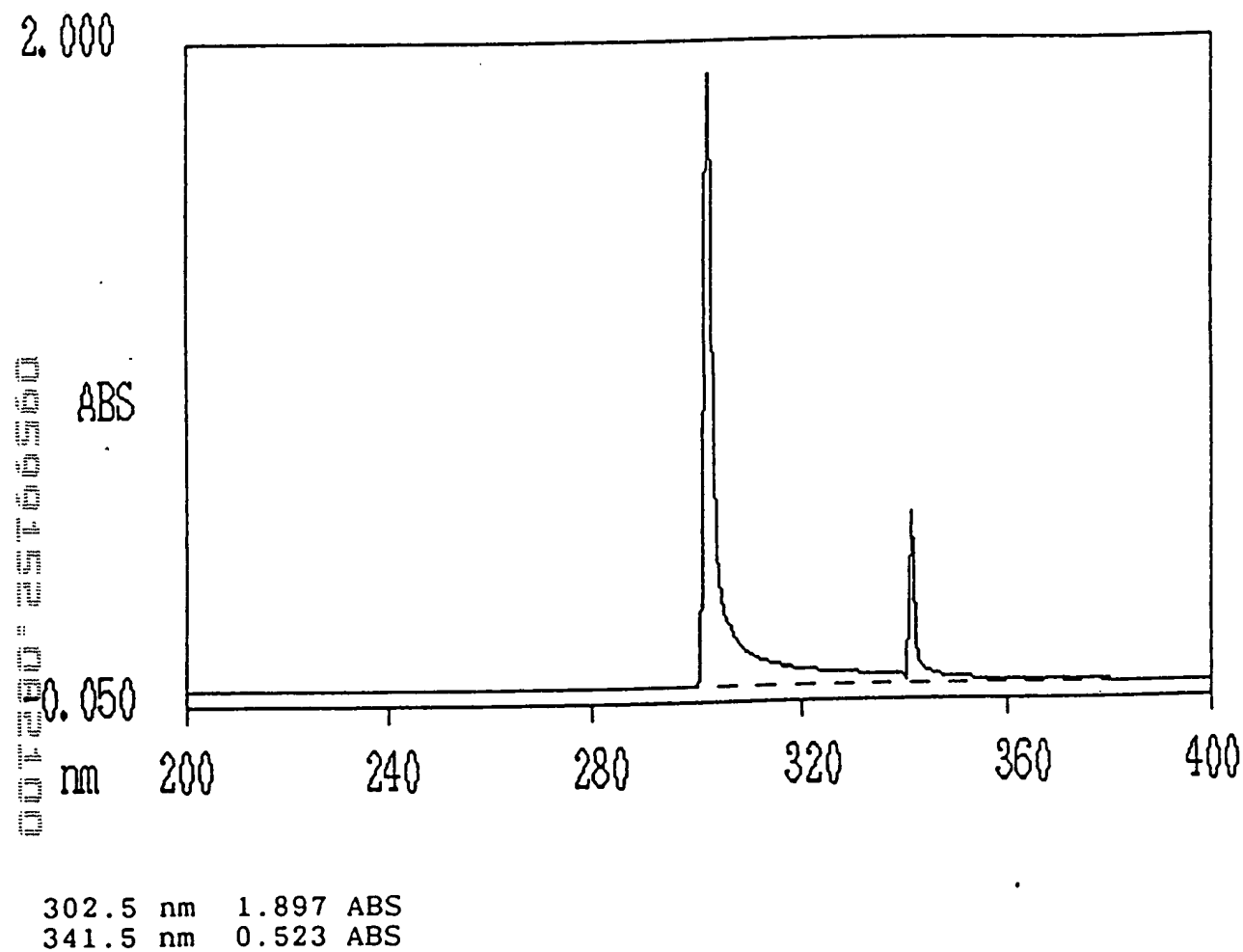


FIG. 68

Hexokinase assay of EC-DG.

% of Drug Uptake in Lung Cancer Cell Line (A549)

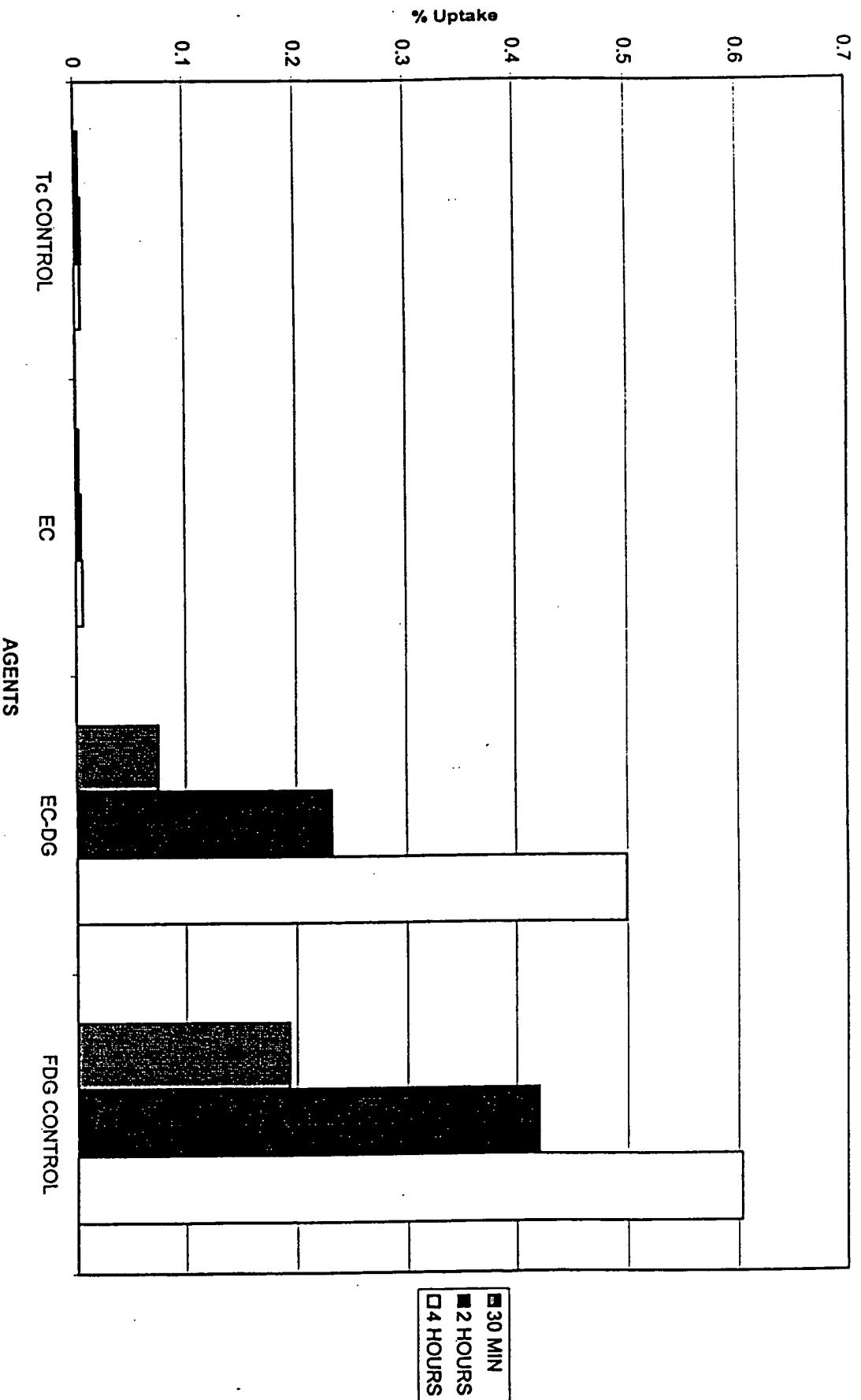


FIG. 69

In vitro cellular uptake assay of ^{99m}Tc -EC-deoxyglucose, ^{99m}Tc -EC and ^{18}F -FDG in lung cancer cell line (A549). ^{99m}Tc -EC-DG showed similar uptake compared to ^{18}F -FDG.

In Vitro Cellular Uptake of ^{99m}Tc -EC-DG in Breast Cancer Cells after Glucose Loading (2 hours incubation; 2uCi/well; 50,000 cells/well; 0.5mL/well)

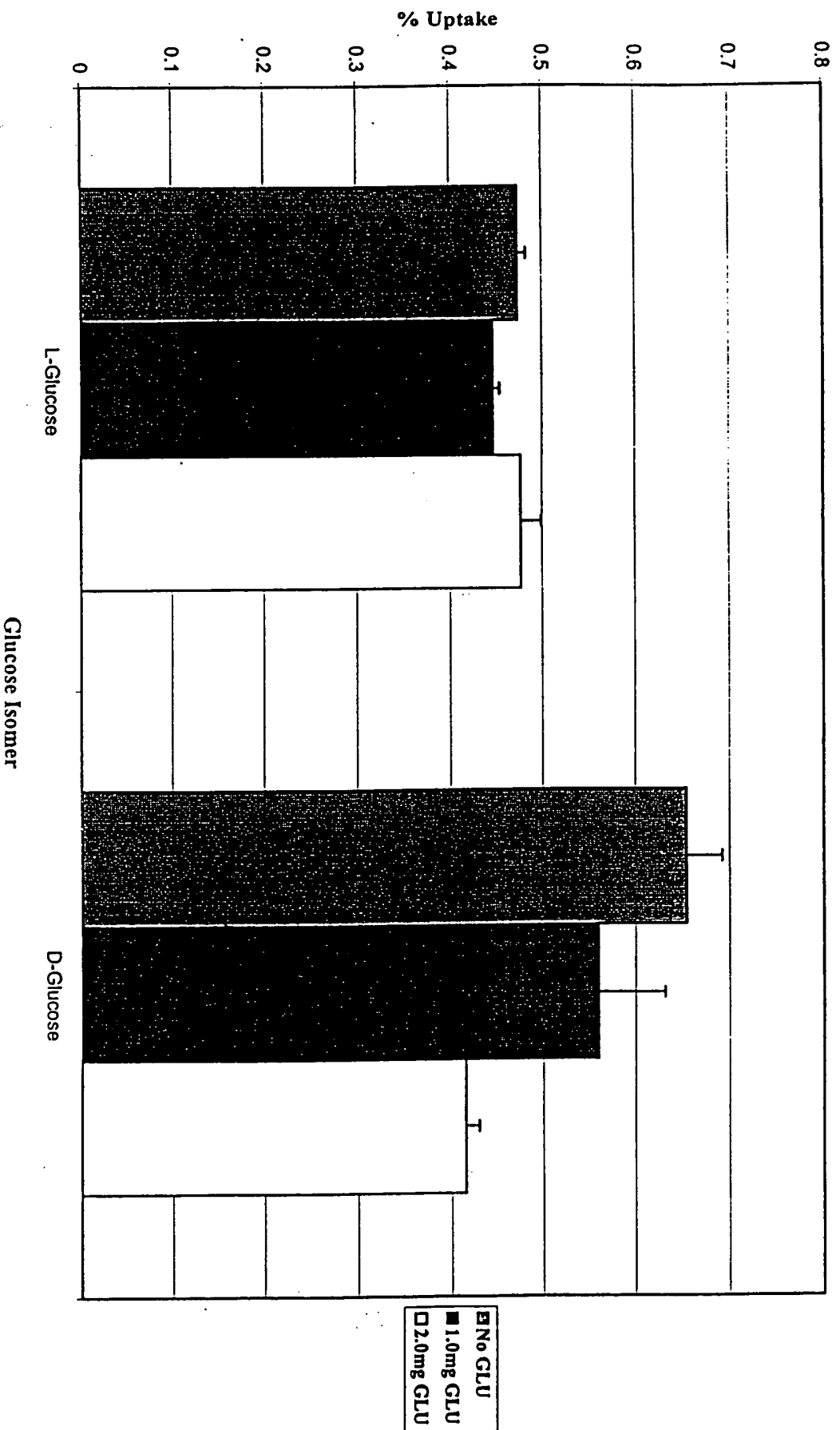


FIG. 70
Effect of L and D-glucose on breast cellular (13762 cell line) uptake of ^{99m}Tc -EC-DG.

In Vitro Cellular Uptake of ^{18}F FDG in Breast Cancer Cells after Glucose Loading (2 hours incubation; $2\mu\text{Ci}/\text{well}$; 50,000 cells/well; 5mL/well)

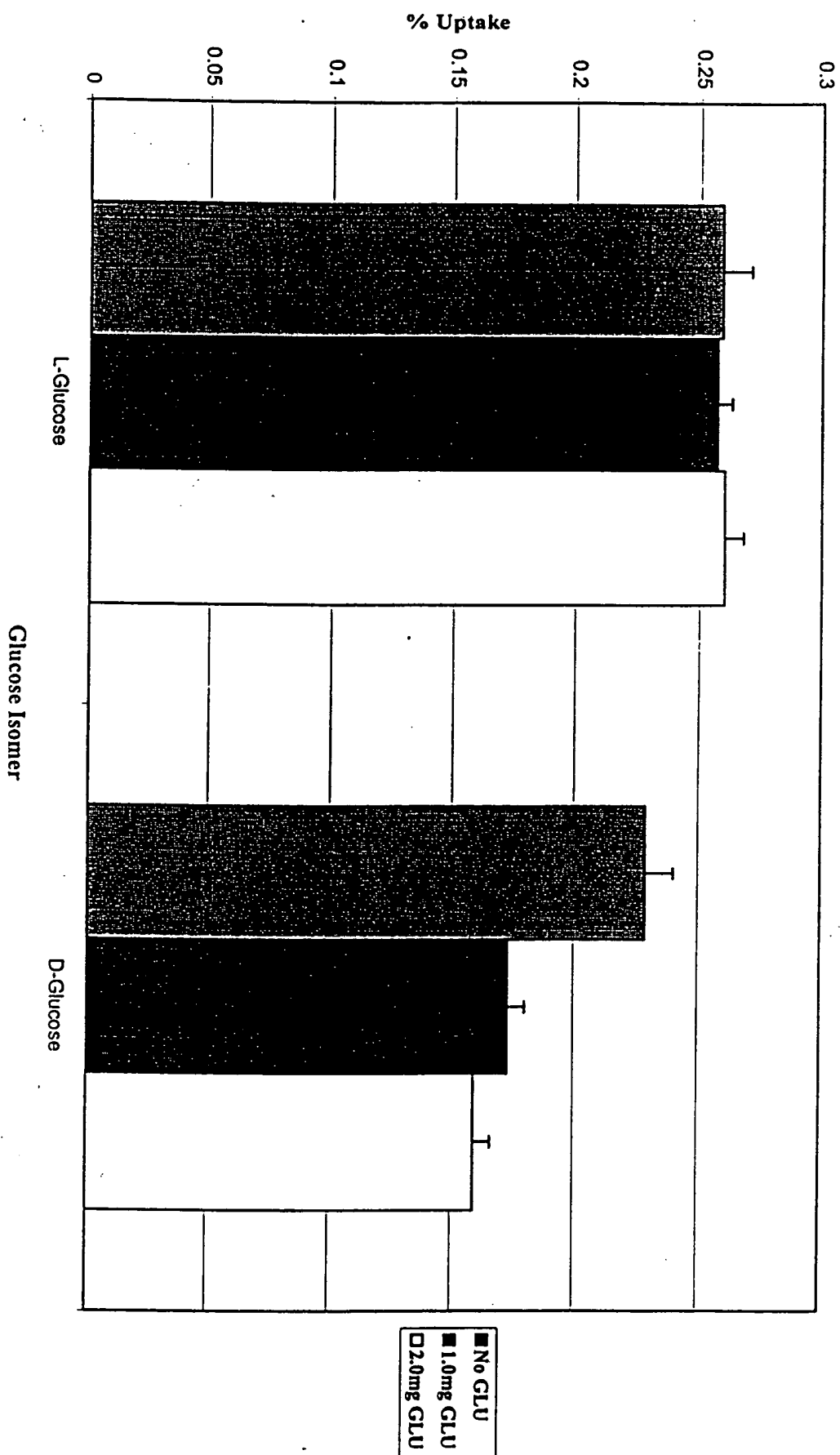


FIG. 71
Effect of d- and l-glucose on breast cellular (13762 cell line) uptake of ^{18}F -FDG.

In Vitro Cellular Uptake of ^{18}F FDG in Lung Cancer Cells after Glucose Loading (2 hours incubation;
2uCi/well; 50,000 cells/well; 5mL/well)

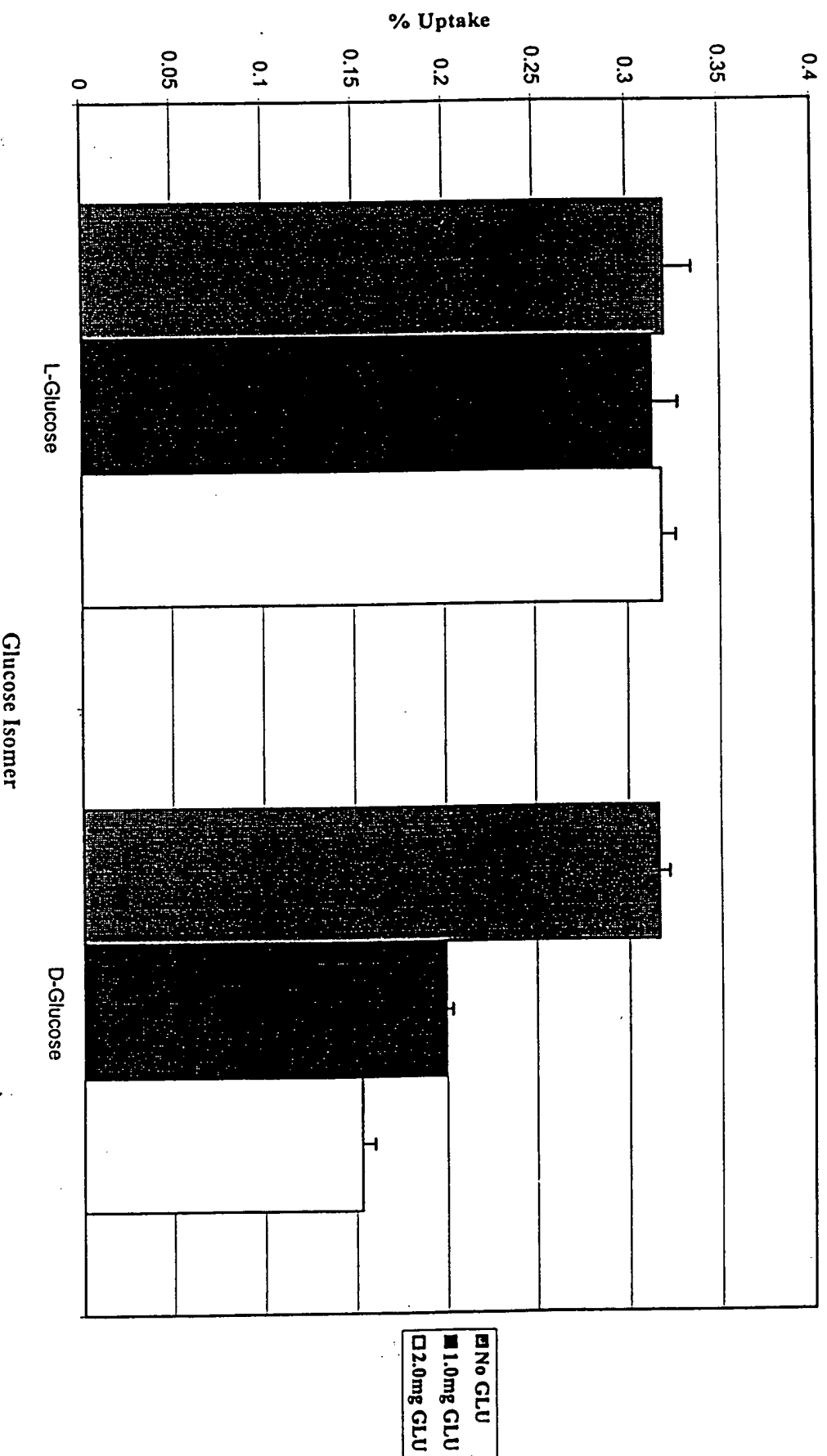


FIG. 72

Effect of d- and l-glucose on lungcellular (A549 cell line) uptake of ^{18}F -FDG.

In Vitro Cellular Uptake of ^{99m}Tc -EC-DG in Lung Cancer Cells after Glucose Loading (2 hours incubation; 2uCi/well; 50,000 cells/well; 0.5mL/well)

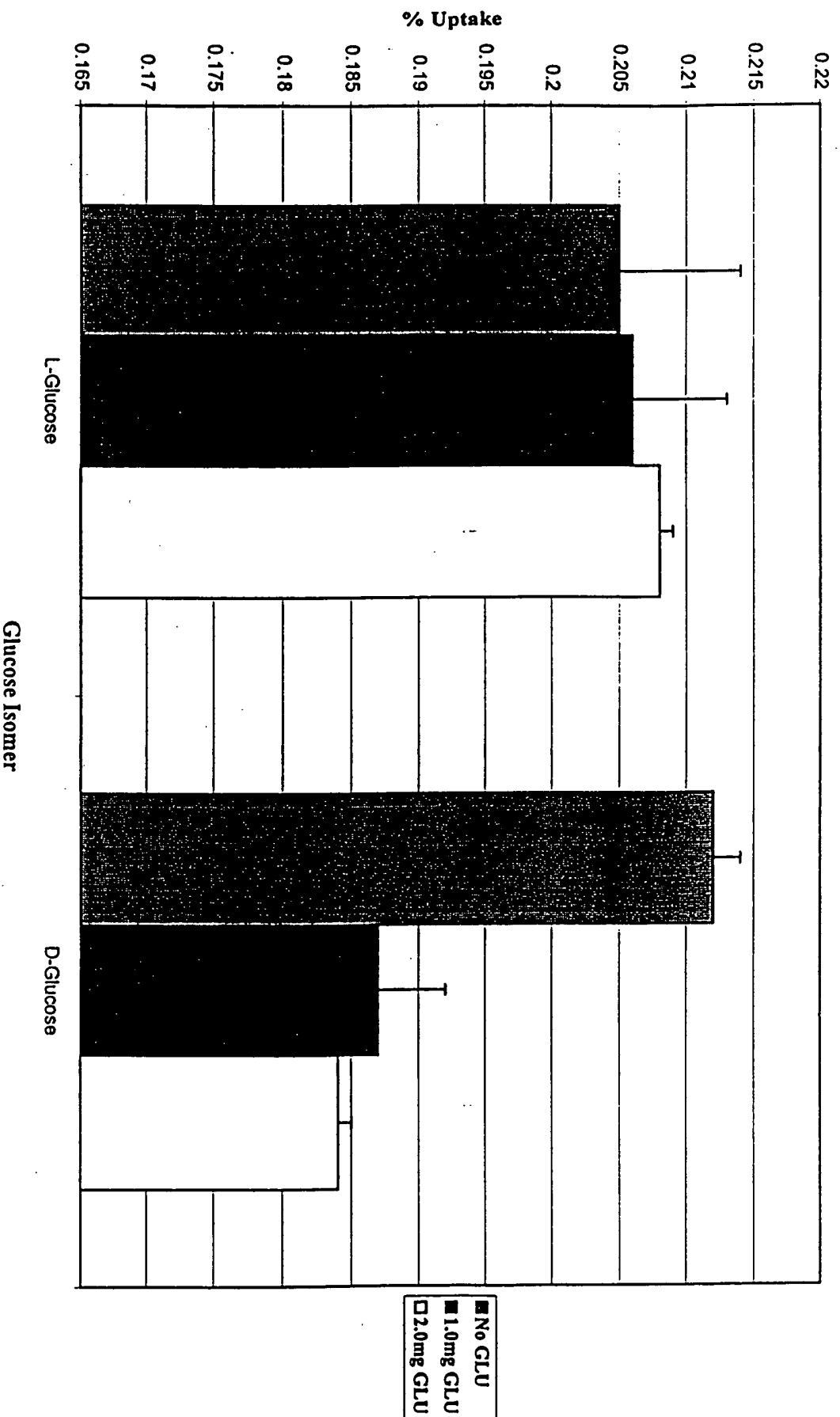


FIG. 73
Effect of d- and l-glucose on breast cellular (A549 cell line) uptake of ^{99m}Tc -EC-DG.

Effect of Intravenous Injection of Glucosamine and EC-DG on Blood Glucose Level in Rats

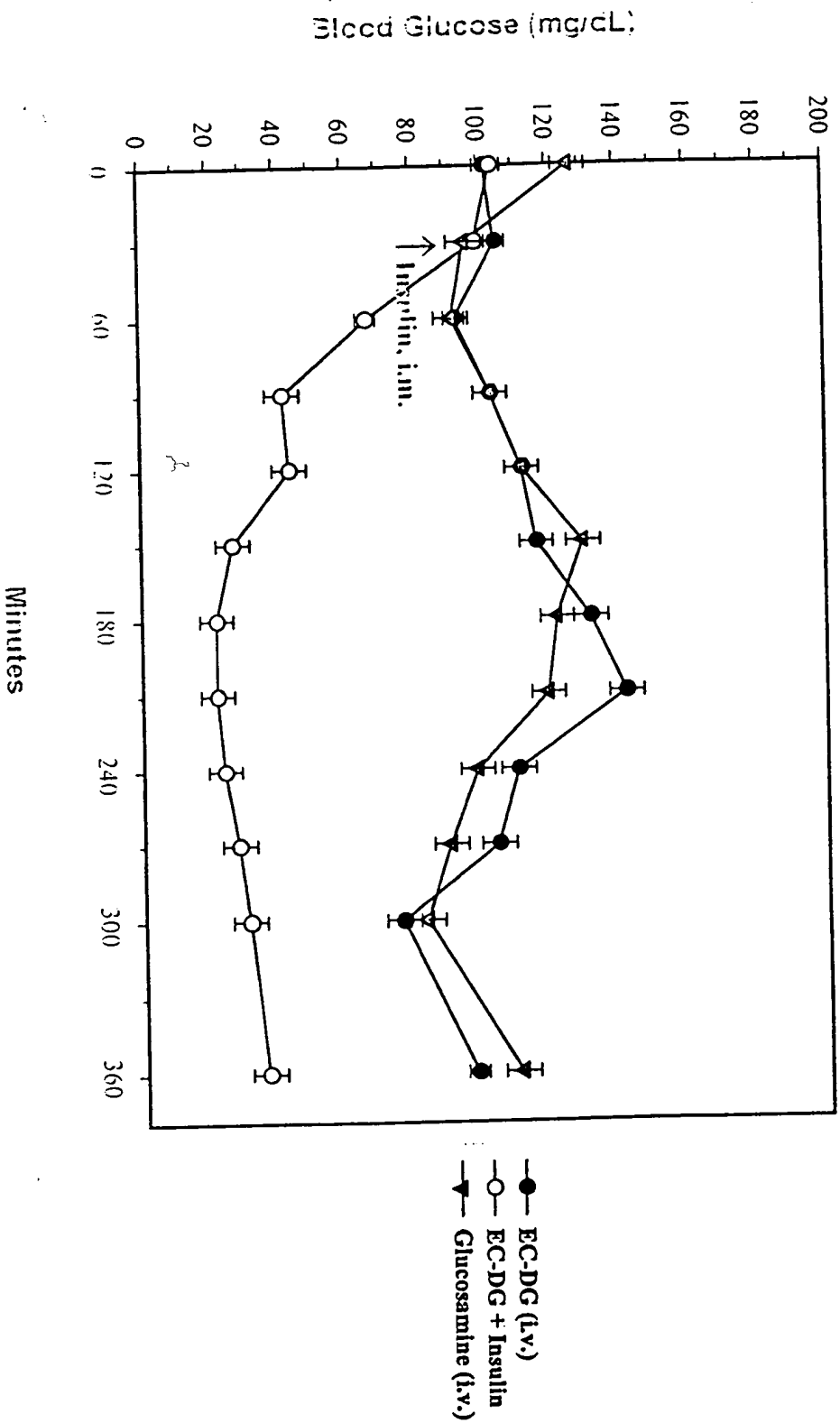


FIG. 74
 Effect of *in vivo* blood glucose level induced by glucosamine and EC-DG (1.2 mmol/kg, i.v.).

Effect of Intravenous Injection of FDG and FDG+Insulin on Blood Glucose Level in Rats

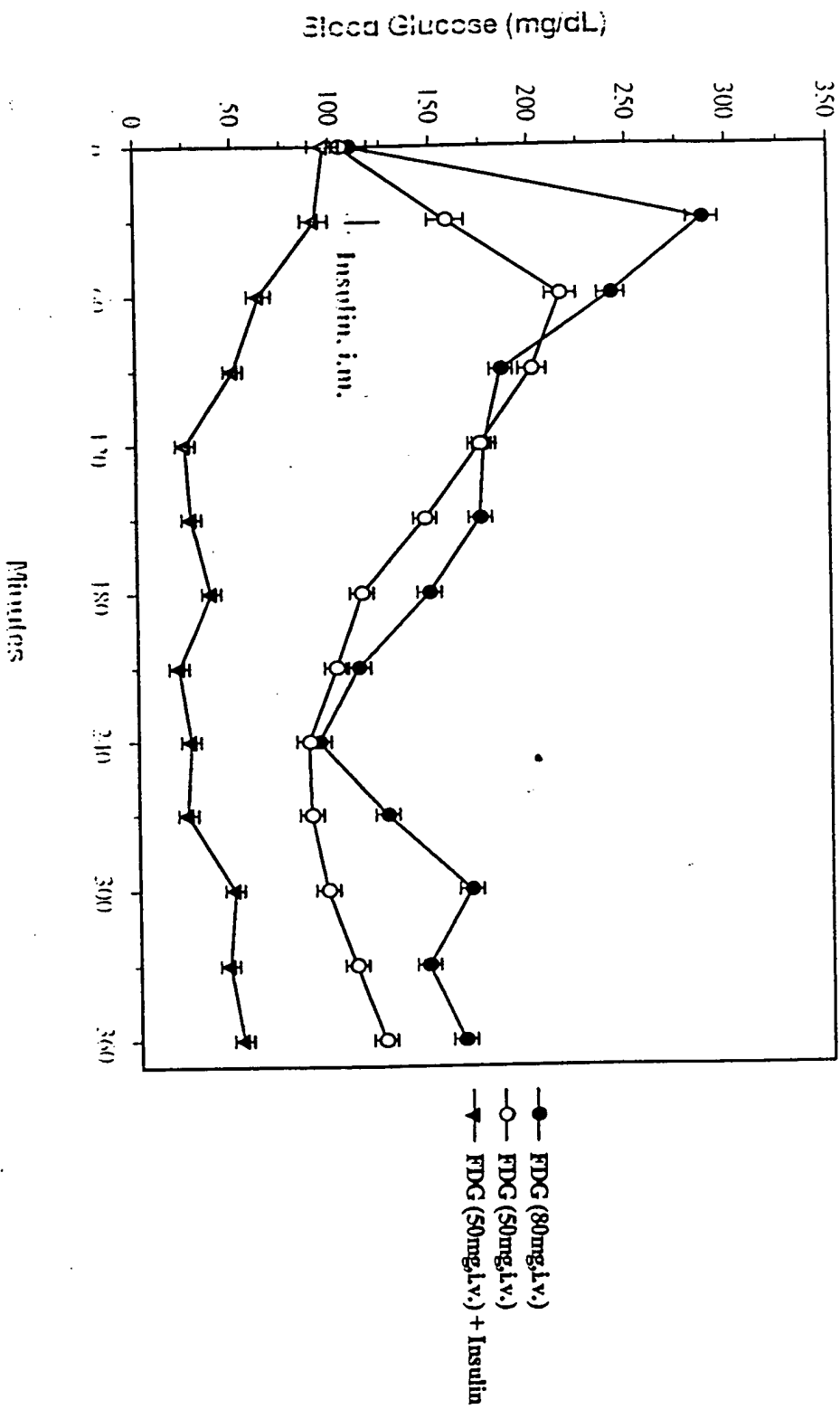


FIG. 75 Effect of *in vivo* blood glucose level induced by FDG (1.2 and 1.9 mmol/kg, i.v.) and insulin.

Tumor-to-Tissue Count Density Ratios of ^{99m}Tc -EC-Deoxyglucose in Breast Tumor-Bearing Rats

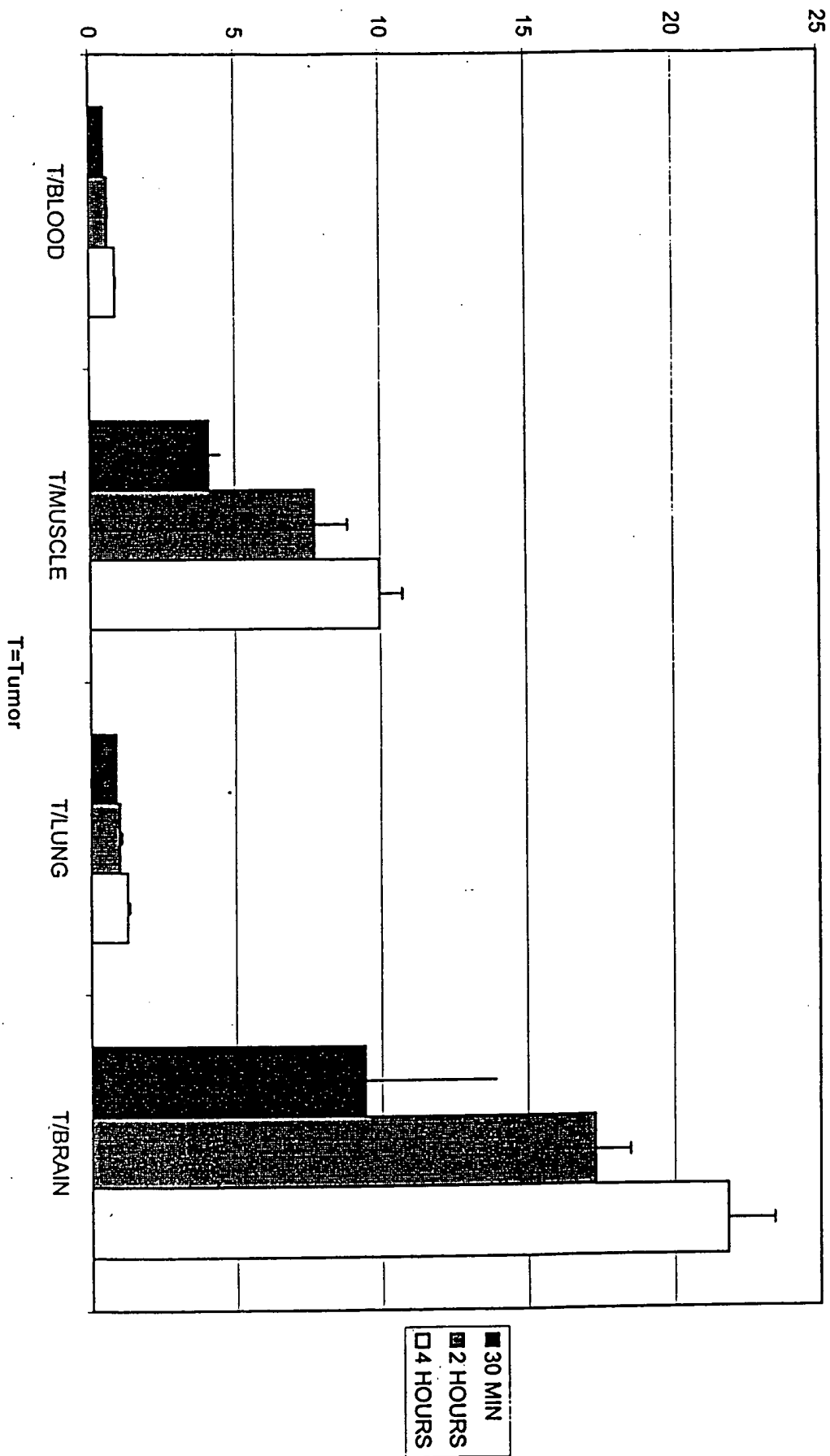


FIG. 76

Tumor-to-tissue count density ratios of ^{99m}Tc -EC-deoxyglucose in breast tumor-bearing rats.

In Vivo Uptake of ^{99m}Tc-EC-Deoxyglucose in Breast Tumor-Bearing Rats

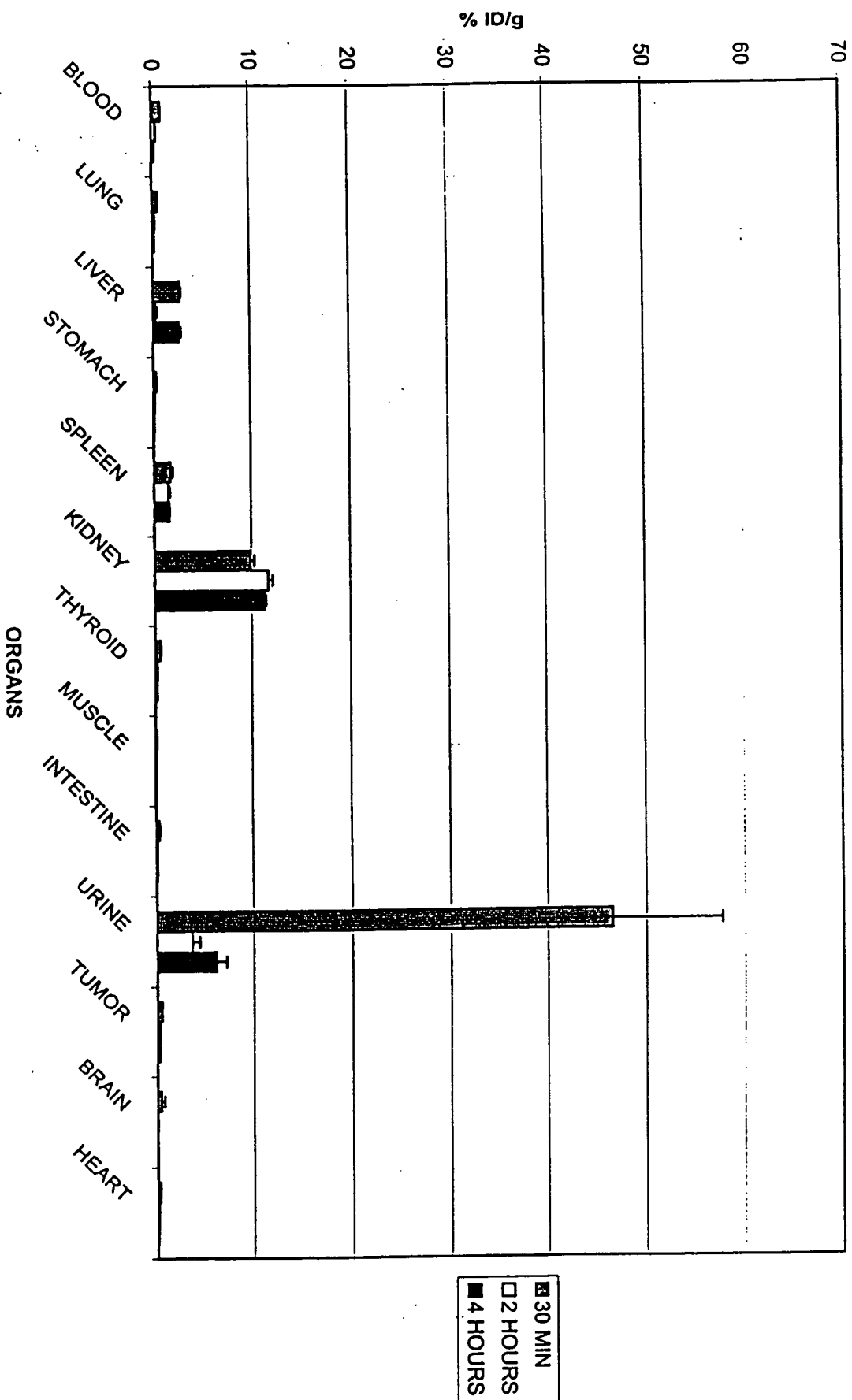


FIG. 77

In vivo biodistribution of ^{99m}Tc-EC-deoxyglucose in breast tumor-bearing rats.

In Vivo Uptake of ^{99m}Tc -EC-Deoxyglucose in Lung Tumor-Bearing Nude Mice

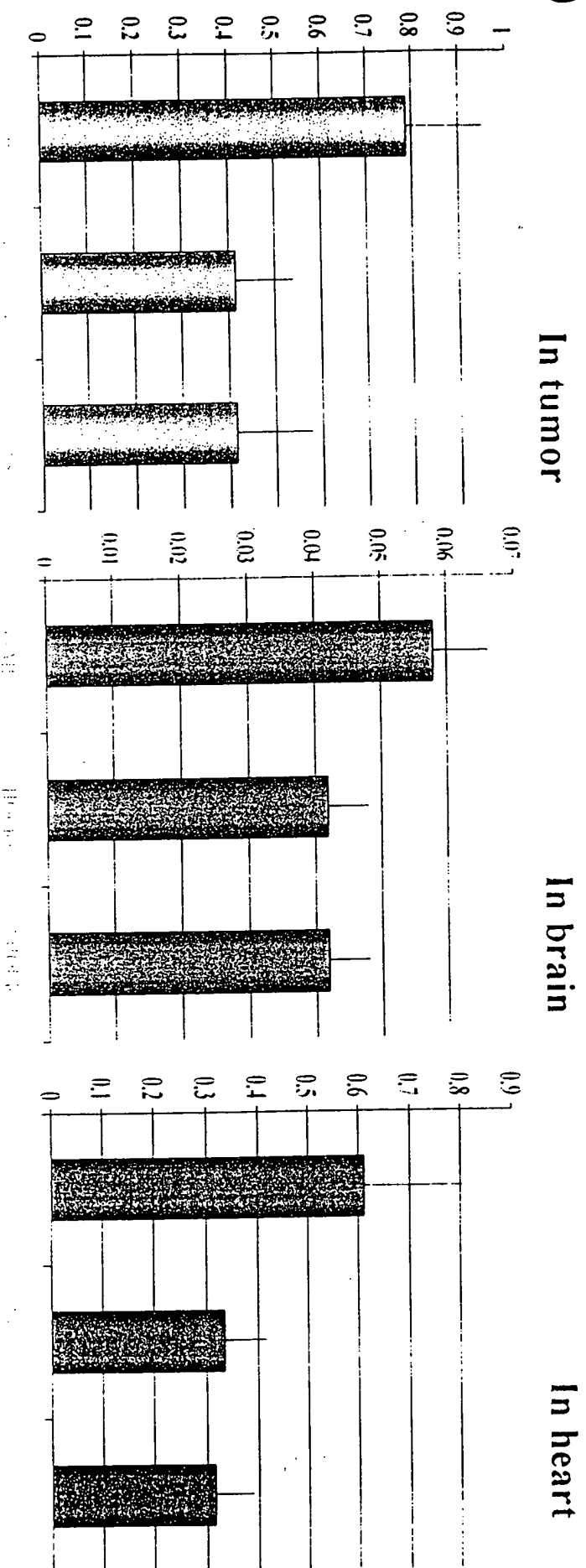


FIG. 78 In vivo tissue uptake of ^{99m}Tc -EC-deoxyglucose in lung tumor-bearing mice.

In Vivo Uptake of ^{99m}Tc -EC-Neomycin in Lung Tumor-Bearing Nude Mice

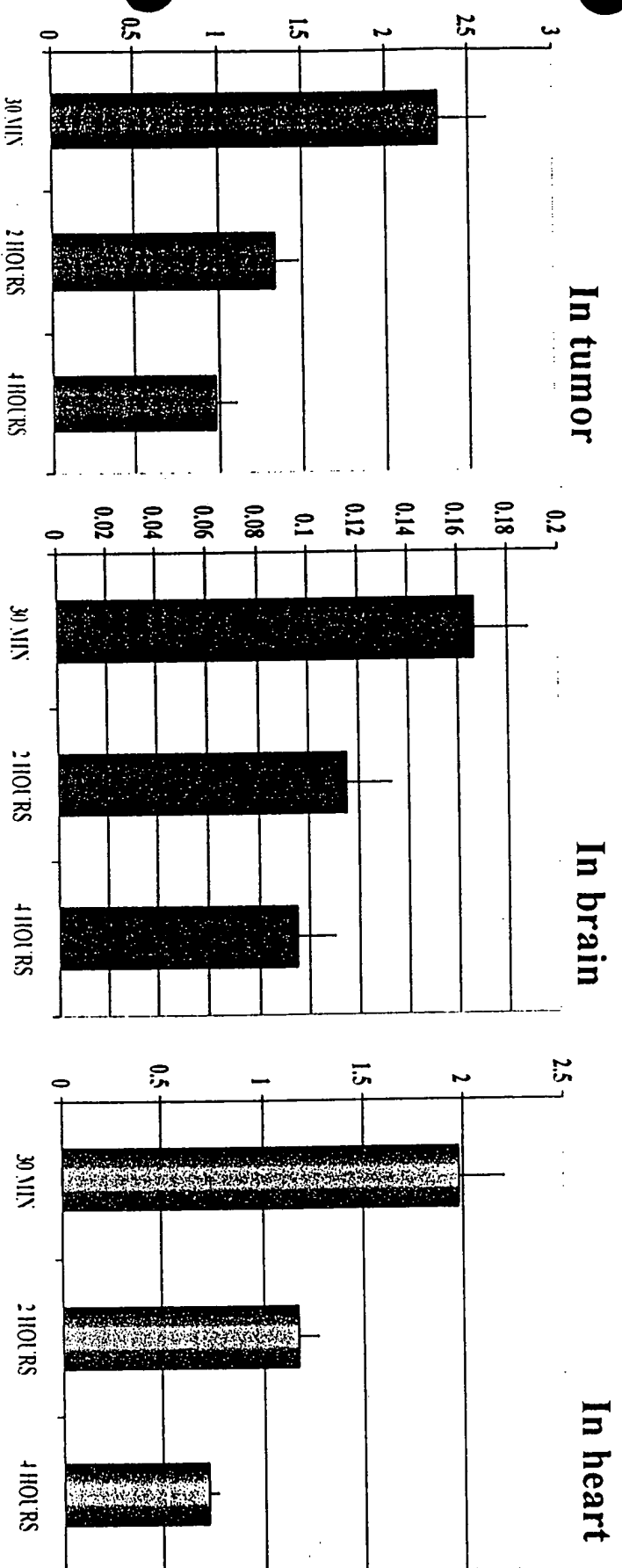


FIG. 79
In vivo tissue uptake of ^{99m}Tc -EC-neomycin in lung tumor-bearing mice.

In Vivo Uptake of ¹⁸F-FDG in Lung Tumor-Bearing Nude Mice

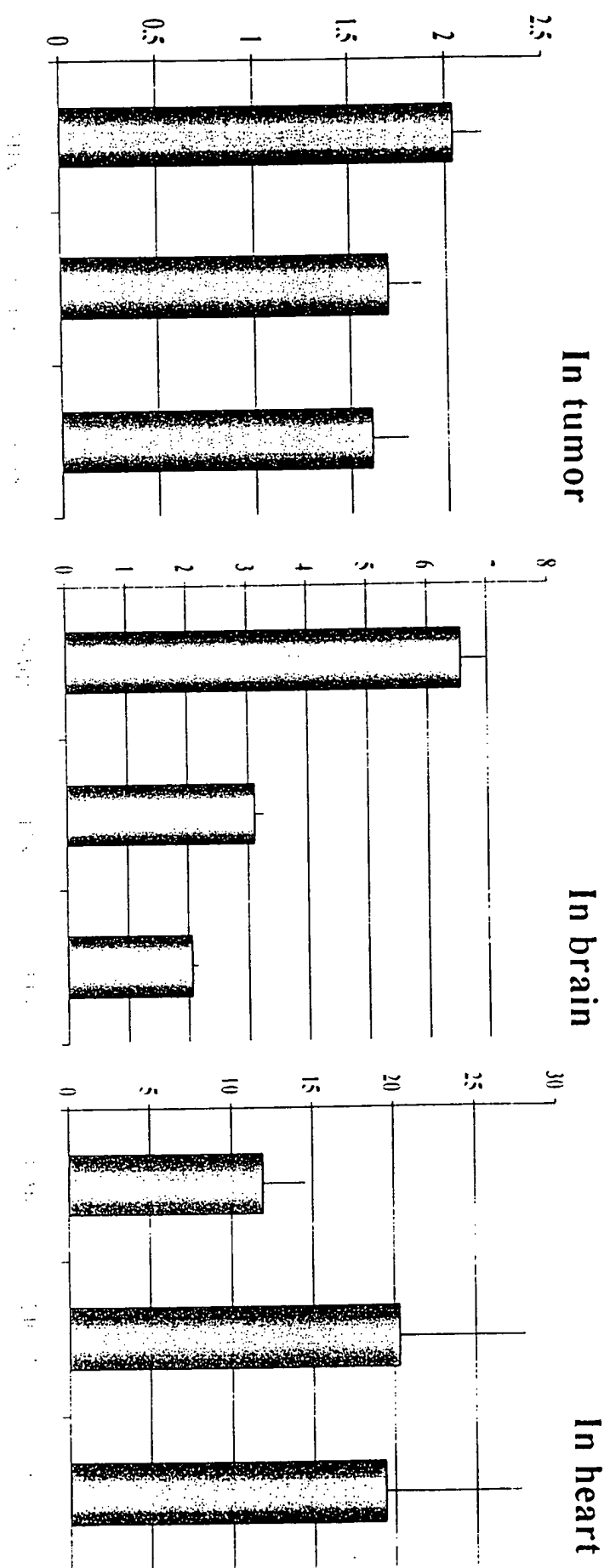


FIG. 80

In vivo tissue uptake of ¹⁸F-FDG in lung tumor-bearing mice.

$^{99m}\text{Tc-EC}$

$^{99m}\text{Tc-EC-Glucose(6)}$

0.5

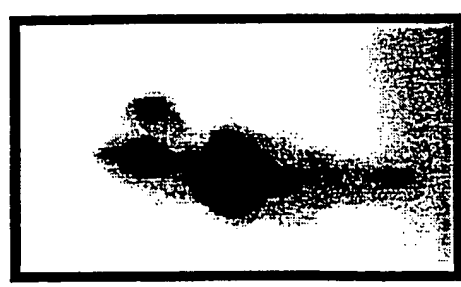
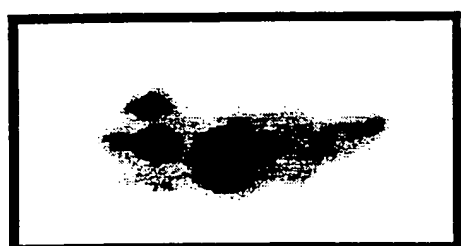
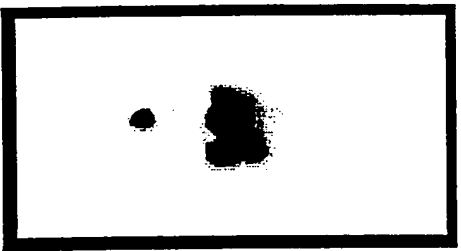
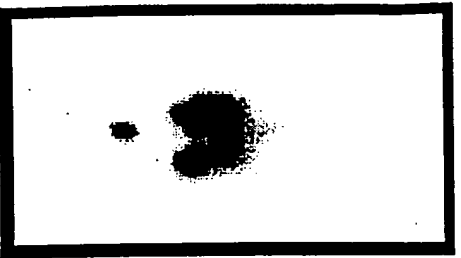
2

4hrs

0.5

2

4hrs



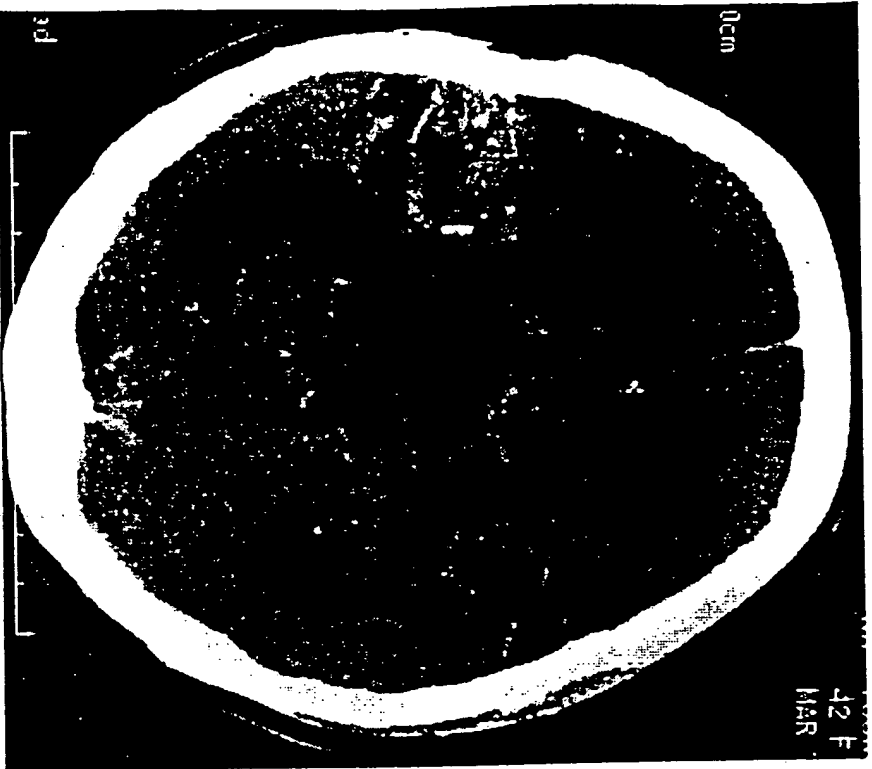
Planar image of breast tumor-bearing rats after administration of $^{99m}\text{Tc-EC}$ and $^{99m}\text{Tc-EC-Glucose(6)}$ (100 $\mu\text{Ci/rat}$, iv.) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

FIG. 81

Planar image of breast tumor-bearing rats after administration of $^{99m}\text{Tc-EC}$ and $^{99m}\text{Tc-EC-deoxyglucose}$ (100 $\mu\text{Ci/rat}$, iv.) showed that the tumor could be well visualized from 0.5-4 hours

Case 1 / 42

Dx : anaplastic astrocytoma



Pre OP



Post OP

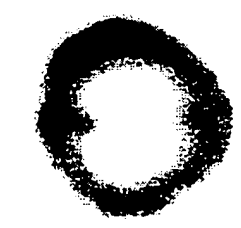
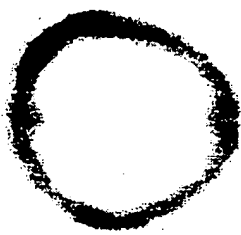
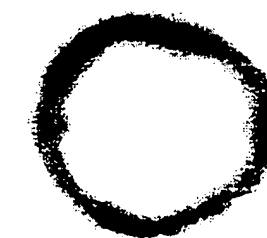
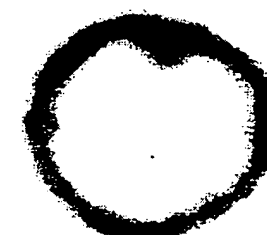
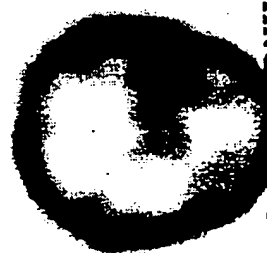
FIG. 82A

MRI of a patient with astrocytoma.

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INFERIOR->SUPERIOR

EC-DG Scan

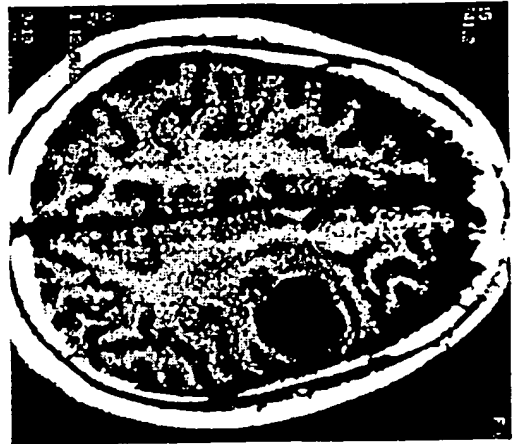
POD-25D

FIG 87R

SPECT with ^{99m}Tc-EC-DG of a patient with astrocytoma.

Case 11/61

Dx: anaplastic astrocytoma with hemorrhage



Pre-OP

Post-OP




FIG. 83A

MRI of a patient with hemorrhagic astrocytoma.


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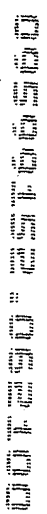


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[illegible]

SPECT with $^{99m}\text{Tc-EC-DG}$ of a patient with astrocytoma.

Dx : Meningioma



MRI of a patient with benign meningioma.

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99mTc-EC-DG-1.5H

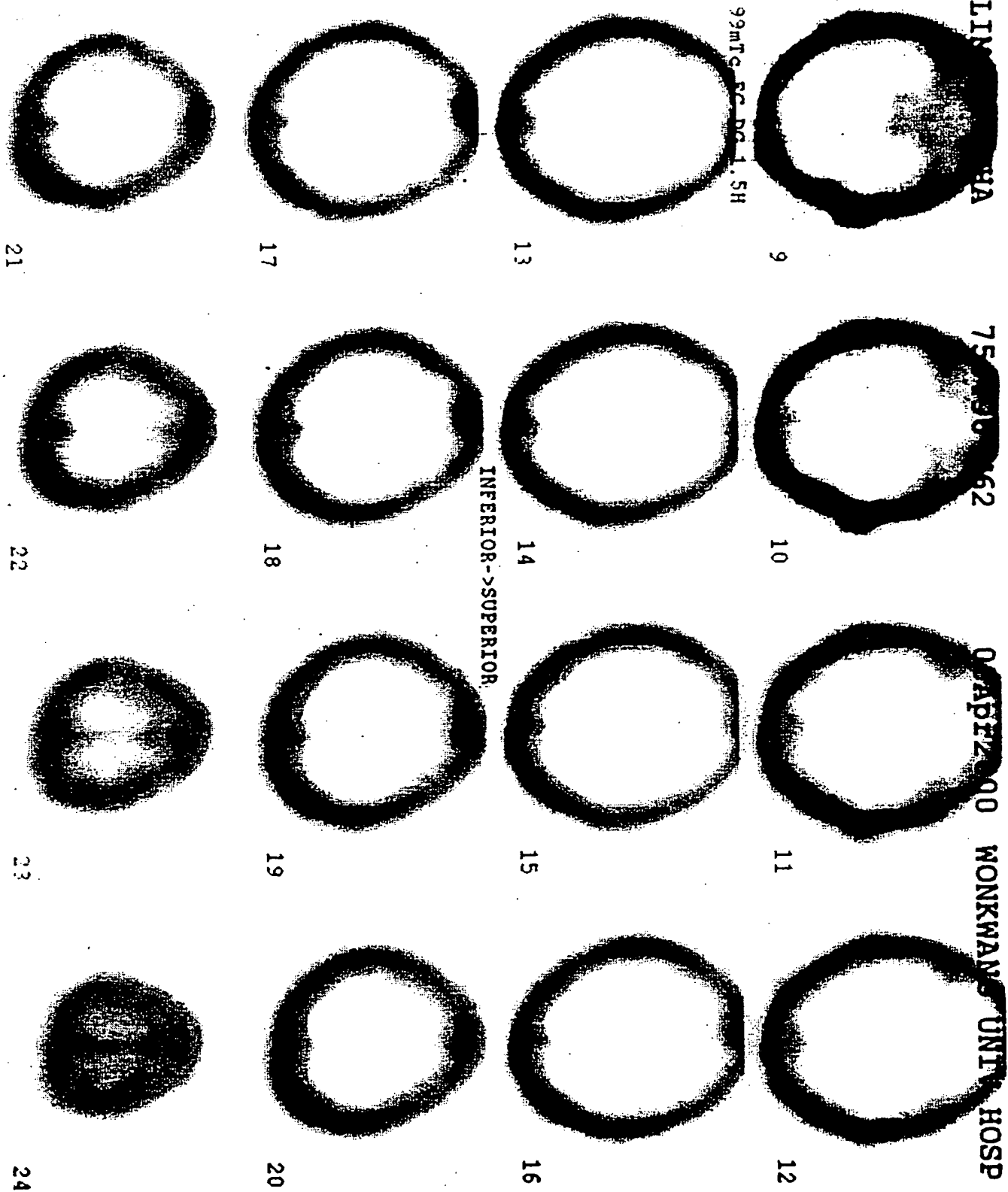


FIG. 84B

SPECT with ^{99m}Tc-EC-DG of a patient with benign meningioma

00599452-062100

showed no focal increased uptake

Case 4. M/V

Ux: Pul. nodule (only necrotic material on biopsy)

TB pleurisy

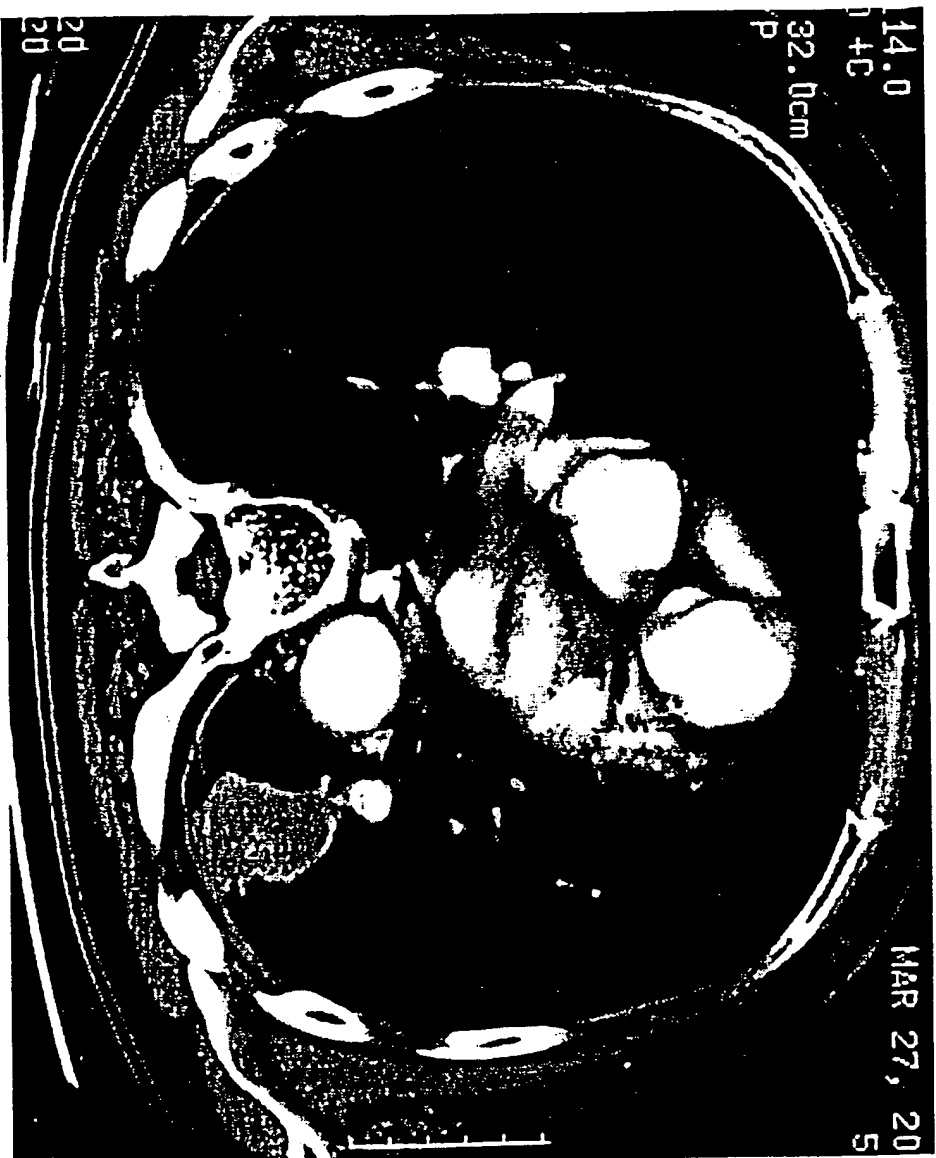


FIG. 85A

CT of a patient with TB in lung.

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99mTc EC DG 40MIN

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INFERIOR->SUPERIOR

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SPECT with ^{99m}Tc-EC-DG of a patient with TB showed no focal

FIG. 85B

Case 5 : 59/M

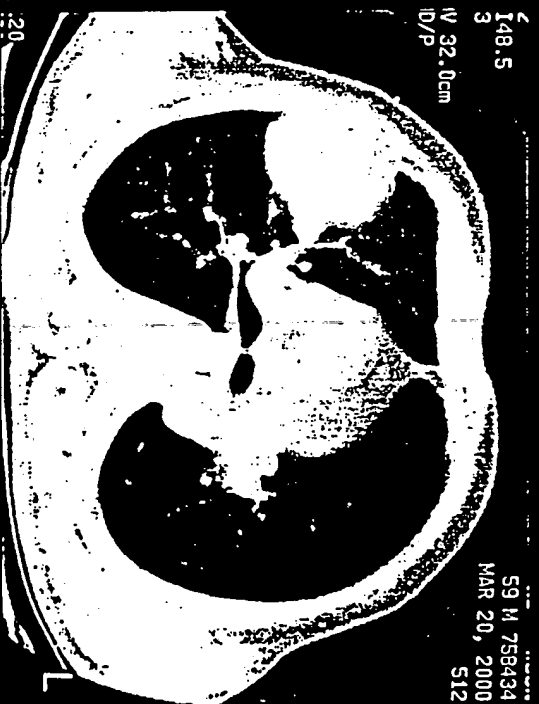
Dx: Squamous carcinoma



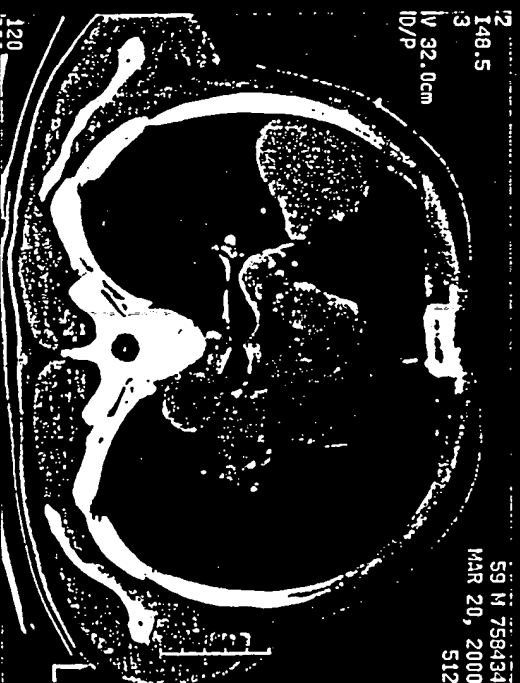
Pre RTX



Post RTX



Pre RTX



Post RTX

JUNG KI MOON
EC DG 1H

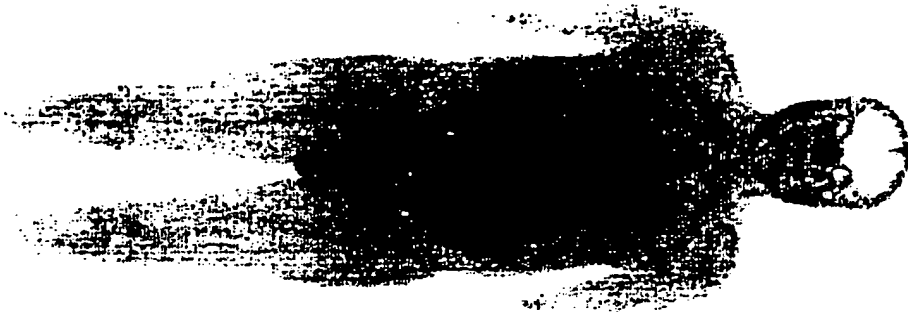
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10Apr2000

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ANT
LUNG CANCER POST RTX 1WK

ANT

POST

POST

FIG. 86B

Whole body images of ^{99m}Tc -EC-DG of a patient with lung cancer.

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INFERIOR->SUPERIOR



EC DG 1H 30 MIN LUNG CANCER POST RTX 1WK

FIG. 86C

SPECT with ^{99m}Tc-EC-DG of a patient with lung cancer, the tumor

showed focal intensified uptake.